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Digital Platforms and the Leverage Problem

ABSTRACT

Antitrust policy towards firms that "leverage" their market power to grant themselves competitive advantages in adjacent markets has come to the fore in recent times with the growth of digital platforms in sectors such as online search, mobile operating systems, online marketplaces and social media. This Article analyzes the historical origins and Chicago critique of the leverage doctrine and how these informed the development of antitrust policy. Antitrust law currently distinguishes between pro- and anti-competitive leveraging in order to achieve the optimal balance between promoting competition in adjacent markets and preserving the legitimate ability of platform owners to enter and compete in adjacent markets. Thus, leveraging is only unlawful under the Sherman Act when it results in consumer harm. The Article then considers recent proposals to address perceived competition issues in digital platform markets, which condemn leveraging even if it benefits consumers in order to protect competitors in adjacent markets from competition on the merits. Empirical criteria that have been present in comparable instances of such intervention, such as bottleneck power over distribution, widespread harm to adjacent market competition, static product boundaries, and a lack or unimportance of integrative efficiencies, are not satisfied in the current context. Absent some proof that they are, the consumer welfare framework under antitrust law should prevail without recourse to more intrusive intervention.

* Trainee Solicitor, Herbert Smith Freehills LLP, London. The views expressed in this Article represent the author's personal views and do not necessarily represent the views of Herbert Smith Freehills LLP or its partners or clients. Herbert Smith Freehills LLP represents or has represented companies mentioned in this Article, but no such client reviewed or commented on the manuscript prior to publication. This Article received no funding. The author alone is responsible for any errors or omissions. The author is grateful for comments on a later draft from Joshua Wright and three anonymous reviewers, and on earlier drafts from Hal Singer, Filippo Lancieri, Friso Bostoen, and Dirk Auer. The author is also grateful to the editors of the *Nebraska Law Review* for their careful and considered work on this Article's manuscript.

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I. INTRODUCTION

In June 2017, the European Commission (EC) fined Google €2.4 billion for "leverag[ing] its market dominance in general internet search into a separate market, comparison shopping."[1] At the time,

1. European Commission Press Release IP/17/1785, Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service (June 27, 2017).

this was the largest fine ever imposed in an antitrust case.[2] One year later, the EC smashed its own record, fining Google a further €4.34 billion for licensing its mobile applications to device manufacturers using Google's Android operating system (OS) in a single bundle.[3] Across the globe, there have been fresh calls to investigate the activities of Google and other tech firms, such as Apple, Facebook, and Amazon (together, GAFA), in multiple lines of business that are adjacent to their core business models.[4] A fear pervades that, once these firms have entered particular adjacent markets, they will favor their own adjacent offerings to the competitive detriment of their competitors. What links these cases, investigations, and accusations is the doctrine of leverage.

Leverage occurs when a firm exploits its monopoly power in one market in order to extend that power to an adjacent market, subsequently exercising market power in that market by raising prices or restricting output or quality.[5] Leverage, in antitrust circles, has evolved into a term of art and is distinguishable from conduct that suppresses competition in the already-dominated market.[6] By definition, leverage involves "the establishment of a new or second monopoly."[7] In the context of digital platforms, leveraging has come to

2. Google strongly contests the merits of the case. *See* Case T-612/17, Google and Alphabet v. Comm'n, 2017 E.C.R. C 369/37.
3. Council Regulation 1/2003, 2018, (AT.40099) (EC) (Google Android) (July 18, 2018) [hereinafter Android Decision].
4. *See, e.g.*, Letter from Orrin G. Hatch, U.S. Sen., to Joseph Simons, Chairman, Fed. Trade Comm'n (Aug. 30, 2018), https://www.hatch.senate.gov/public/cache/files/5935a818-76c5-4ad6-ab29-51241b9a8a83/2018.08.30%20Senator%20Hatch%20Letter%20to%20FTC%20Chairman%20Simons.pdf (urging "the Federal Trade Commission (FTC) to reconsider the competitive effects of Google's conduct in search and digital advertising."); Makena Kelly, *Google Under Antitrust Investigation by 50 Attorneys General*, THE VERGE (Sept. 9, 2019), https://www.theverge.com/2019/9/9/20857440/google-antitrust-investigation-attorneys-general-advertising-search [https://perma.unl.edu/C54A-R9AZ].
5. *See, e.g.*, Times-Picayune Pub. Co. v. United States, 345 U.S. 594, 611 (1953) (holding that "monopolistic leverage" occurs when "a seller exploits his dominant position in one market to expand his empire into the next"); Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 516 (1985) ("Traditional leverage theory claims that a monopolist's use of its power in its own market to control activities in another market typically represents an attempt to spread its power to the other market."); Robin Cooper Feldman, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2081 (1999) ("Leverage occurs when a monopolist uses power in one market to induce or foreclose sales in another market and thereby monopolize both"). Use of the term "adjacent market" is intended to mean a line of business that is complementary to the platform owner's core offering and is not intended to represent that the line of business constitutes a separate market for the purpose of market definition.
6. *Cf*. Ward S. Bowman, *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19 (1957) (distinguishing "leverage as a revenue-maximizing device and leverage as a monopoly-creating device.").
7. *Id.* at 20.

encompass a wide variety of conduct. Examples include platform owners promoting their own adjacent offerings in search result pages, bundling or pre-installing their adjacent offerings with platform software code, shutting off access to Application Programming Interfaces (APIs) or data to third parties, or generally reducing the compatibility of third-party offerings with the platform as a means of distribution. This Article uses the term "leveraging" to encompass any form of conduct that makes it harder for third-parties to distribute their products or services through a platform, while benefitting the platform owner's competing product.

Importantly, leverage is not a standalone theory of abuse in antitrust law. It is better thought of as a *category* that encompasses numerous legal theories of harm, such as tying and refusals to deal, where the conduct's competitive effects are felt in a market distinct from the one in which the defendant is said to be dominant.[8] Leveraging is distinct from adjacent market entry or "vertical integration," which denotes the mere presence of a firm in multiple related or complementary markets, rather than dealing in the production or use of the complementary product at arm's length through the price system.[9] Leverage, on the other hand, is the act of distorting competition in the adjacent market by, through various means, exploiting market power in the primary market. However, adjacent market entry and leveraging are inherently linked due to the belief held by some that the former begets the latter.

Due to the historic development of the leverage doctrine, the term "leverage" has negative connotations and is often associated with conduct that has no effect or purpose apart from the suppression of competition. However, a significant insight of the Chicago School of antitrust analysis was that monopolists often leverage in order to provide consumers with better products or lower prices. Though some aspects of the Chicago critique stand rebutted by so-called "Post-Chicago" insights, its fundamental contribution—that leveraging is predominantly pro-competitive and benefits consumers—remains vi-

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8. *See infra* note 115; ROBERT O'DONOGHUE & JORGE PADILLA, THE LAW AND ECONOMICS OF ARTICLE 102 TFEU 153 (2d ed., 2013) ("Leveraging is not an independent ground of abuse [in EU competition law]. It is simply a convenient (and sometimes misleading) label to identify cases that have in common the feature that a dominant firm uses its power on one market to commit an abuse that has effects in an adjacent . . . market.").

9. This Article prefers the term "adjacent market entry" to describe production that takes place inside the boundaries of the firm, rather than vertical integration, which implies participation in "more than one successive stage of the production or distribution of goods or services." *See* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 395 (4th ed.). For further discussion on why the term "vertical integration" is a misnomer in certain situations, see Bruce M. Owen, *Antitrust and Vertical Integration in "New Economy" Industries with Application to Broadband Access*, 38 REV. INDUS. ORG. 363 (2011).

tal when considering the behavior of platform firms in the digital economy. Consumers often benefit from adjacent market entry and leveraging by dominant firms because those firms can use their existing positions to provide better quality or lower prices that they are uniquely placed to provide. This does not mean that leveraging is or should be *per se* legal. Under the existing regime, it is possible to tackle anti-competitive leverage while condoning behavior that constitutes competition on the merits.

However, some scholars believe that the entry by large digital platform firms into lines of business adjacent to their core offerings is giving rise to competition problems that are beyond the reach of the existing antitrust toolbox, including the leveraging of market power.[10] These scholars suggest that the growth of GAFA has led to a concomitant decrease in innovation and investment by firms that distribute their goods and services (digital or otherwise) through these firms' platforms.

In response, some scholars have suggested that platform owners should face a higher (or claimant firms a lower) burden of proof when leveraging complaints are brought.[11] Others suggest a regulatory framework to complement antitrust law in the form of a "non-discrimination" standard, which would altogether prevent vertically-integrated platform firms from tying, bundling, integrating, or otherwise privileging their own adjacent products (despite the efficiencies that this conduct may produce).[12] Others, notably the Neo-Brandeisians (so-called in homage to Justice Louis Brandeis, an early and famous exponent of "small-business welfare"), view *any* adjacent market entry by dominant firms as inherently concerning because those firms are more likely than not to subsequently leverage their market power to exclude rivals in the adjacent markets, thus anti-competitively spreading their tentacles across multiple markets 'til kingdom come.[13]

10. Other issues include privacy concerns raised by data-collection, excessive concentration in certain markets and the impact of digital platforms on news consumption.
11. Jacques Crémer, Yves-Alexandre de Montjoye & Heike Schweitzer, *Competition Policy for the Digital Era*, EUR. COMM'N, 1, 42 (2019) [hereinafter EC Digital Competition Report]; STIGLER CENTER COMMITTEE FOR THE STUDY OF DIGITAL PLATFORMS, MARKET STRUCTURE AND ANTITRUST SUBCOMMITTEE, REPORT 77 (2019) [hereinafter STIGLER] (suggesting that "the proof requirements imposed upon antitrust plaintiffs [are relaxed or reversed] in appropriate cases").
12. *See* Kevin Caves & Hal Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard*, 26 GEO. MASON L. REV. (2019); Frank A. Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEGAL F. 263 (2008) (advocating neutrality principles for search engines).
13. Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973 (2019) (proposing structural separation between platforms and adjacent services); TIM WU, THE MASTER SWITCH: THE RISE AND FALL OF INFORMATION EM-

Neo-Brandeisians would solve this by blocking dominant firms from entering into adjacent markets. This Article posits that all three of these proposals, to varying degrees, would abandon the interests of consumers in favor of less efficient small businesses, at the expense of consumer welfare.

Meanwhile, regulators across the globe are paying close attention to antitrust's leverage problem. In 2018 and early 2019, the U.S. Federal Trade Commission (FTC) held a series of hearings on Competition and Consumer Protection in the twenty-first century, which included a discussion of exclusionary conduct in digital markets.[14] In July 2019, the U.S. Department of Justice (DOJ) announced that it had launched a review of digital platforms, including how they purportedly achieved market power and whether they "are engaging in practices that have reduced competition, stifled innovation, or otherwise harmed consumers."[15] In the European Union (EU), the EC held a conference and commissioned the production of a report to examine competition policy in the digital era in early 2019.[16] Also in 2019, the Australian competition authority published a final report containing a series of recommendations aimed at leveraging in digital markets.[17] Finally, in the United Kingdom (UK), a panel chaired by Jason Furman recommended a series of changes and updates required for antitrust law to operate effectively in digital markets (the Furman Inquiry Report).[18] This spurred the launch by the UK Competition and Markets Authority (CMA) of a digital markets strategy, including the

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PIRES (2010) (describing these controls on adjacent market entry as the "Separations Principle"). *See also* MARSHALL STEINBAUM & MAURICE E. STUCKE, THE EFFECTIVE COMPETITION STANDARD: A NEW STANDARD FOR ANTITRUST 33 (2018) ("To prevent monopolies and monopsonies from leveraging their power across markets, the [effective competition] standard would prohibit their vertical integration into other markets, where the integration may foster the monopolist's or monopsonist's ability and incentives to distort competition."). For further background on the Neo-Brandeisian movement, see Lina M. Khan, *The New Brandeis Movement: America's Antimonopoly Debate*, 9 J. EUR. COMPETITION L. & PRAC. 131 (2018); TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE 127–39 (2018) (setting out a "Neo-Brandeisian agenda").

14. *Hearings on Competition and Consumer Protection in the 21st Century*, FED. TRADE COMM'N, https://ftc.gov/policy/hearings-competition-consumer-protection [https://perma.unl.edu/7XDP-RYKM] (last visited June 23, 2019).

15. Press Release, U.S. Dep't of Justice Antitrust Division, Justice Department Reviewing the Practices of Market-Leading Online Platforms (July 23, 2019), https://www.justice.gov/opa/pr/justice-department-reviewing-practices-market-leading-online-platforms [https://perma.unl.edu/E6MY-6YKE].

16. EC Digital Competition Report, *supra* note 11.

17. AUSTL. COMPETITION & CONSUMER COMM'N, DIGITAL PLATFORMS INQUIRY (2019).

18. UK DIGITAL COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 133–36; 157–62 (2019) [hereinafter Furman Inquiry Report].

opening of a market study into digital platforms.[19] This Article aims to contribute to the discussion surrounding platform owners' activities in adjacent markets, a focal point of policymakers' deliberations.

This Article proceeds as follows. Part II briefly discusses the rise of digital platforms and the conduct that critics deplore and places the debate in context by describing the activity of platform owners active in online search, mobile operating systems, online marketplaces, and social media. Part III provides a brief overview of the historical development of the leverage doctrine, focusing on U.S. courts' aversion to vertical integration and tying arrangements, for which the leverage doctrine formed the basis. It then analyzes the critique of the leverage doctrine by scholars associated with the University of Chicago, concluding that the fundamental contribution of the Chicago critique—that leveraging is predominantly beneficial to consumers—is still relevant today. Thus, antitrust law currently distinguishes pro- from anticompetitive leverage in order to achieve the optimal balance between promoting competition in adjacent markets and preserving the legitimate ability of dominant firms to enter and compete in adjacent markets. Part IV examines the proposals put forward by the scholars who criticize digital platform firms, including those advocating structural separation, those calling for non-discrimination regulation, and those proposing a recast antitrust law under which dominant firms bear a higher burden of proof. As we shall see, these proposals, to varying degrees, abrogate consumer welfare in favor of "small business welfare" and would sweep the rug from under the existing framework that, some would argue, already strikes the correct balance between the ability of dominant firms to enter adjacent markets and the survival of small businesses in those markets. Ultimately, the recommendations of these scholars depend on empirical criteria that have not been verified, including platform owners' strategic bottleneck power over distribution in adjacent markets, evidence of widespread competitive harms in adjacent markets, discernible product boundaries, and an unimportance or relative infrequency of integrative efficiencies that benefit consumers. Unless these criteria are empirically verified, the status quo, which considers the benefits consumers receive from leveraging and adjacent market entry, should prevail.

This Article focuses largely on the position in the U.S. However, it is useful where appropriate to draw on cases and commentary from the EU and other jurisdictions where there has been more enforcement in recent times.

19. Press Release, Competition & Markets Authority, CMA Launches Digital Markets Strategy (July 3, 2019), https://www.gov.uk/government/news/cma-launches-digital-markets-strategy [https://perma.unl.edu/2G2L-ZSYS].

II. LEVERAGING BY DIGITAL PLATFORM OWNERS

A. Leveraging Concerns in Digital Markets

Firms operating in the digital economy often operate platforms composed of software code that connect users in a single group to each other, or users in one group to users in other groups.[20] The "network effects" that characterize platform markets can lead to rapid horizontal growth and, all else equal, a single firm that serves as the standard for all users to settle on.[21] As a result, in the real world platform markets are frequently concentrated with a few firms serving consumer demand. Platform operators also often grow vertically by adding new features to their platforms to make them more attractive to users (and, where applicable, third-party distributors). This is especially true when platform markets are in their incipiency: a diligent platform firm will enter adjacent markets to attract users to the platform, which will then attract third parties to distribute their products through the platform, which will in turn attract more users, and so on. This can serve to solve the so-called "chicken-and-egg" problem that bedevils nascent platform business models.[22] For a platform to survive, it must be attractive to both consumers *and* third-party distributors; thus, hampering innovation within the platform ecosystem could destroy the platform value entirely.[23] Choosing to enter a complementary line of business already served by third-parties is therefore a complex strategic decision for any platform owner, fraught with tradeoffs. Nonetheless, scholars have concluded that platform owners predominantly have the incentive to encourage innovation by producers of complements, as this increases platform value.[24]

However, once a particular platform market matures, third-party producers can theoretically become reliant on the platform to distribute their products. Some scholars are critical of GAFA's practice of entering adjacent lines of business served by independent vendors and leveraging the popularity of their platforms to direct consumers to-

20. *See, e.g.*, Richard Schmalensee & David S. Evans, *Markets with Two-Sided Platforms*, *in* 1 ISSUES IN COMPETITION L. AND POL'Y 667 (2009).

21. *See* Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93 (1994).

22. *See* Andrei Hagiu & Daniel Spulber, *First-Party Content and Coordination in Two-Sided Markets*, 59 MGMT. SCI. 933, 935 (2013) (finding that the provision by platforms of first-party content "enable[s] platforms facing unfavorable expectations to compensate for their difficulty in attracting third-party sellers.").

23. Annabelle Gawer & Rebecca Henderson, *Platform Owner Entry and Innovation in Complementary Markets: Evidence from Intel*, 16 J. ECON. & MGMT. STRATEGY 1, 2 (2007).

24. Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2003).

wards their own adjacent offerings. As Lina Khan, a vocal critic of digital platform owners, writes:

> [P]latforms not only serve as critical infrastructure, but are also integrated across markets. This enables a platform to leverage its platform dominance to establish a position in a separate or ancillary market. By placing a platform in direct competition with the firms using its infrastructure, this form of integration also creates a core conflict of interest, incentivizing a platform to privilege its own goods and services over those offered by third parties.[25]

This concern has been characterized as one entity serving as both "player" and "referee" on the platform. Allegedly, this dual role creates an irreconcilable misalignment between the interests of users, third party distributors, and the platform owner itself. Margrethe Vestager, European Competition Commissioner, has described how firms that act as "both player and referee, competing with others that rely on the platform, but also setting the rules that govern that competition," is "one of the biggest issues we face."[26] Elizabeth Warren, who has argued in favor of breaking GAFA up as part of her presidential campaign, claims that "you don't get to be the umpire and have a team in the game."[27] Despite its vague, somewhat rough-hewn application to real-world scenarios, the player-referee paradigm has picked up steam as a digestible appellation that ostensibly sums up the leveraging issue. Going forward, it is important that all sides of the debate have a firm grasp on the law and economics of leverage, so that the player-referee label of the twenty-first century does not befall the same fate as "leverage" did in the preceding century.

While this Article takes as given the presence of a platform owner in one or more adjacent markets, much of the debate revolves around *whether* that firm should be able to enter the adjacent market in the first place, either through natural growth or merger. Thus, while this Article focuses on single-firm conduct under § 2 of the Sherman Act (and its European counterpart, Article 102 of the Treaty on the Func-

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25. Lina M. Khan, *What Makes Tech Platforms So Powerful?*, PRO-MARKET (Apr. 5, 2018), https://promarket.org/makes-tech-platforms-powerful/ [https://perma.unl.edu/HZ4W-B8CD]. *See also* Lina M. Khan, *The Ideological Roots of America's Market Power Problem*, 127 YALE L.J.F. 960, 961 (2018) (arguing that "a few technology platform companies mediate a rapidly growing share of our commerce and communications" and that "these firms leverage their platform power into new lines of business, extending their dominance across sectors.").

26. Margrethe Vestager, Competition and the Digital Economy, speech at Association of European Competition Law Judges Annual Conference (June 6, 2019).

27. Alexander C. Kaufman, *Elizabeth Warren on Breaking up Amazon: 'You Don't Get To Be The Umpire And Have A Team'*, HUFF. POST (Apr. 22, 2019), https://www.huffpost.com/entry/elizabeth-warren-tech-amazon_n_ 5cbe6120e4b00b3e70ce32b8 [https://perma.unl.edu/A9EH-4K3P]. *See also* Elizabeth Warren, *Here's How We Can Break up Big Tech*, MEDIUM (Mar. 8, 2019), https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c [https://perma.unl.edu/H447-G9DJ], at 4 (proposing a prohibition on "owning both the platform utility and any participants on that platform.").

tioning of the European Union (TFEU)), the conclusions drawn in response to various policy proposals will axiomatically have important consequences for merger control policy. Indeed, for those acquisitions by platform owners that have been scrutinized, leveraging has been a key theory of harm. For example, the DOJ considered a leveraging theory of harm when it investigated Google's acquisition of Admeld in 2011.[28] In the EU, leveraging concerns prompted the EC to extract commitments from Microsoft when it acquired LinkedIn.[29] The EC also considered leveraging theories of harm when it investigated Apple's acquisition of Shazam.[30]

Leveraging underpins past, present, and future merger cases, especially in digital markets. One oft-cited statistic is that GAFA (plus Microsoft) have together acquired over 400 businesses in the past decade (although it is also widely accepted that the vast majority of these acquisitions have been presumptively pro-competitive).[31] For example, there is a growing concern that Facebook should not have been allowed to acquire Instagram or WhatsApp or Google to acquire Waze.[32] The Furman Inquiry Report concluded that merger control in

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28. Press Release, Dep't of Justice Antitrust Division, Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigation of Google Inc.'s Acquisition of Admeld Inc. (Dec. 2, 2011), https://www.justice.gov/opa/pr/statement-department-justices-antitrust-division-its-decision-close-its-investigation-google [https://perma.unl.edu/9ATJ-KXKC] (noting that the investigation evaluated whether the acquisition would "enable Google to extend its market power in the Internet search industry to online display advertising through anticompetitive means.").

29. Commission Decision, Case M.8124 (*Microsoft/LinkedIn*) (Dec. 6, 2016), at ¶ 301 (investigating whether "the combination of LinkedIn's [professional social network (PSN)] services with Microsoft's PC-based OSs and productivity software could lead the merged entity to leverage its strong market position from the markets for PC-based OSs and for productivity software to the market for PSN services."). To clear the merger, Microsoft made a series of commitments for a period of five years. *See* ¶¶ 409–21.

30. Commission Decision, Case M.8788 (*Apple/Shazam*) (Sept. 6, 2018), at ¶ 274 (considering whether Apple would have the incentive to leverage its "position from music recognition apps to the markets for digital music streaming apps" by, for example, "denying or degrading access of competing providers of digital music streaming apps to Shazam's referral mechanism" or whether the Apple would have the incentive to integrate "Shazam's music recognition functionalities within the Apple Music apps, and at the same time [deny] similar levels of integration to competing providers of digital music streaming apps."). Ultimately, the EC cleared this merger without imposing conditions. *Id*. at ¶ 349.

31. *See, e.g.*, Furman Inquiry Report, *supra* note 18, at 91–92 ("In the last decade, Amazon, Apple, Facebook, Google, and Microsoft combined have made over 400 acquisitions globally . . . The Panel recognises that the large majority of the acquisitions by large digital companies in recent years have likely been benign or beneficial for consumers.").

32. Tim Wu & Stuart A. Thompson, *The Roots of Big Tech Run Disturbingly Deep*, N.Y. TIMES (June 7, 2019), https://www.nytimes.com/interactive/2019/06/07/opinion/google-facebook-mergers-acquisitions-antitrust.html [https://perma.unl.edu/

digital markets "needs a reset" and that "the CMA should take more frequent and firmer action to challenge mergers that could be detrimental to consumer welfare through reducing future levels of innovation and competition".[33] This debate is a subset of wider dissension concerning appropriate levels of vertical merger enforcement generally.[34] Though this Article focuses on the scrutiny of platform owners that are already active in adjacent markets, it is important to bear in mind that the policy proposals examined herein also have ramifications for vertical merger policy.

B. Examples

To place the debate surrounding adjacent market entry and leveraging in the digital economy in its proper context, what follows is a broad overview of practices engaged in by digital platform owners in various online markets, such as online search, mobile operating systems, online marketplaces, and social media, that are the subject of criticism.[35]

1. Online Search

Google runs a general internet search engine (Google Search), which accounts for a significant proportion of internet users' internet searches across the globe. As well as running a general internet search engine, Google has also entered several complementary lines of business, such as mapping services (Google Maps), comparison shopping services (Google Shopping), online job listings, and comparison flight services (Google Flights). Google's rivals in these ancillary lines of business complain that Google leverages the popularity of its general internet search engine to grant itself competitive advantages to its ancillary services. Specifically, Google allegedly grants prominent display to its adjacent services within its search results pages, which renders links to rival websites less visible to users, resulting in more users clicking on the former, rather than the latter. In 2017 the EC found that this behavior, in the context of comparison shopping services, violated Article 102 TFEU.[36] Similar complaints have been

86T7-4KRL]; Daniel Trotta, *Wall Street Critic Warren Vows to Break up Amazon, Facebook, Google*, REUTERS (Mar. 8, 2019), https://uk.reuters.com/article/uk-usa-election-warren-idUKKCN1QP1M2 [https://perma.unl.edu/5TXP-JMD9].

33. Furman Inquiry Report, *supra* note 18, at 93.

34. *See, e.g.*, Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962 (2018) (proposing more stringent vertical merger enforcement).

35. The following discussion does not make any representations as to the dominance of the platform owners in their respective platform markets, but merely serves to exemplify the wide practice of adjacent market entry and leveraging by platform firms that have been the subject of criticism.

36. Council Regulation 1/2003, 2017 (AT.39740) (EC) [hereinafter *Google Shopping*]; *see also* Thomas Hoppner, *Duty to Treat Downstream Rivals Equally: (Merely) a*

lodged in relation to Google's job listings[37] and local reviews.[38] However, the FTC closed a similar investigation in 2013, reasoning that Google's product designs were adopted "to improve the quality of its search results" and that "any negative impact on actual or potential competitors was incidental to that purpose."[39] This is because integrating specialized search results with the general search results pages provides users with richer content more quickly, economizing on user search costs.[40] In June 2019, it was reported that the DOJ was readying an investigation into Google, although the specific businesses and conduct under review are not yet known.[41] In September 2019, fifty attorneys general announced that they had launched an investigation into Google's advertising and search businesses.[42]

2. *Mobile Operating Systems*

Apple and Google produce popular mobile operating system platforms, respectively iOS and Android, and also produce applications that "sit on top of" those platforms. These applications include music streaming (Apple Music), mapping services (Apple Maps/Google Maps), and web-browsing (Safari/Google Chrome). Apple and Google,

Natural Remedy to Google's Monopoly Leveraging Abuse, 1 EUR. COMPETITION & REG. L. REV. 208 (2017) (characterizing Google's conduct as a form of leveraging).

37. Klaus Lauer & Douglas Busvine, *Google's German Jobs Product Anti-competitive, Says Springer Unit*, REUTERS (June 6, 2019), https://uk.reuters.com/article/uk-eu-google-antitrust-axel-sprngr/googles-german-jobs-product-anti-competitive-says-springer-unit-idUKKCN1T71RM [https://perma.unl.edu/9WWM-GQ2P]; Jon Porter, *Google's Job Search Tool Faces Complaints from Rivals in Europe*, THE VERGE (Aug. 13, 2019), https://www.theverge.com/2019/8/13/20803799/google-european-union-job-listing-tool-sites-complaint-competition-commission [https://perma.unl.edu/BTR6-WPJE].
38. Rochelle Toplensky & Hannah Kuchler, *Yelp Files New EU Complaint Against Google Over Search Dominance*, FIN. TIMES (May 22, 2018), https://www.ft.com/content/42ac9192-5dd2-11e8-ad91-e01af256df68 [https://perma.unl.edu/CM7G-3SQ7].
39. Statement of the Fed. Trade Comm'n Regarding Google's Search Practices, In the Matter of Google Inc., FTC File Number 111-0163 (Jan. 3, 2013) [hereinafter FTC Google Statement]. In November 2018, the Brazilian competition authority closed its investigation into Google's search practices, reasoning that there was a lack of evidence that Google's conduct negatively affected competition comparison shopping services and that users nevertheless benefitted from Google's conduct. *See* Press Release, Conselho Administrativo de Defesa Econômica, Superintendência-Geral Recomenda Arquivamento de Investigação Contra o Google (Nov. 20, 2018), http://www.cade.gov.br/noticias/superintendencia-geral-recomenda-arquivamento-de-investigacao-contra-o-google [https://perma.unl.edu/J5PY-B5X9].
40. *See also* John M. Yun, *Understanding Google's Search Platform and the Implications for Antitrust Analysis*, 14 J. COMPETITION L. & ECON. 311 (2018).
41. Brent Kendall & John D. McKinnon, *Justice Department Is Preparing Antitrust Investigation of Google*, WALL ST. J. (June 1, 2019), https://www.wsj.com/articles/justice-department-is-preparing-antitrust-investigation-of-google-11559348795 [https://perma.unl.edu/MUP4-Q8SZ].
42. Kelly, *supra* note 4.

through various ways and means, bundle their apps with their software platforms or with other apps. Some allege that this behavior stifles competition in the app markets because users exhibit bias towards default options (and having to reach consumers through an app store is a much less efficient means of reaching consumers). In June 2018, the EC found that Google illegally leveraged between various mobile application markets by tying some of its Android applications together in a bundle.[43] Specifically, smartphone manufacturers could not pick and choose between the likes of the Google Play application store, Google Chrome, or Google Search; if a manufacturer wanted to pre-install one app, it had to pre-install a whole suite of apps. One year later, the Competition Commission of India found that similar conduct amounted to "prima facie leveraging of Google's dominance" in India.[44]

In a similar vein, Apple has been accused of leveraging the popularity of and its control over iOS to increase usage of its various adjacent services. In April 2019, the Dutch competition authority announced that it had commenced an investigation into whether Apple (potentially along with Google) abused a dominant position by "giving preferential treatment to its own apps."[45] Echoing the leveraging concerns explored so far, the Dutch authority found that "[o]n the one hand, Apple and Google have an interest in offering many different apps from app providers in their app stores. On the other hand, however, Apple and Google are app providers in their own right, too. So their apps compete with those of other market participants."[46] The authority poses that "[t]hese competing interests may pose antitrust problems."[47] Also in April 2019, two producers of parental control applications filed a complaint with the EC alleging that Apple made it unduly difficult for them to distribute their software through Apple's App Store, in order to preference Apple's Screen Time functionality (which is integrated with its software platform).[48]

43. Android Decision, *supra* note 3.
44. Aditya Kalra, *Exclusive: Google Appears to Have Leveraged Android Dominance–India Watchdog*, REUTERS (June 28, 2019), https://www.reuters.com/article/us-google-india-antitrust-exclusive/exclusive-google-appears-to-have-leveraged-android-dominance-india-watchdog-idUSKCN1TT1Q2 [https://perma.unl.edu/6PY6-TWNT].
45. Press Release, Authority for Consumers & Markets, ACM Launches Investigation into Abuse of Dominance by Apple in Its App Store (Apr. 11, 2019), https://www.acm.nl/en/publications/acm-launches-investigation-abuse-dominance-apple-its-app-store [https://perma.unl.edu/E2YQ-JH5U].
46. *Id.*
47. *Id.*
48. Press Release, Qustodio, Qustodio & Kidslox File a Complaint Against Apple with the European Commission over Abuse of Dominant Position (Apr. 30, 2019). Apple has since adjusted its policies so that parental control app developers can access technologies in iOS that allow them to operate. *See Updates to the App*

On the other hand, technically integrating various apps, which necessitates tying them together in a bundle and, indeed, giving them "preferential treatment" relative to third-party apps, can generate efficiencies that do not prevail if the apps are distributed on a standalone basis.[49] As Carl Shapiro notes, "the boundary between the 'platform' and services running on that platform can be fuzzy and can change over time."[50] Moreover, platforms need to have rules that govern the negative externalities that certain users or third-parties exert on other users of the platform in order to maximize the value of the platform to all users.[51] This can involve stymieing the compatibility of third-party applications with the platform itself. Apple, in a press release following the parental control app complaint, stated that certain parental control apps "put users' privacy and security at risk."[52] Apple has also invoked this sort of justification as a response to a complaint that Spotify, the music-streaming service, has made to the EC.[53] Spotify claimed that Apple illicitly put Spotify at a competitive disadvantage vis-à-vis Apple's own music streaming service within the iOS platform by levying a 30% commission on subscriptions to Spotify's premium ad-free service, blocking certain upgrades to Spotify's app, and locking Spotify out of Apple's other ecosystems, such as Siri, HomePod, and Apple Watch.[54] In response, Apple claimed that it only rejected Spotify's app updates when they broke the App Store rules and that it had supported Spotify's integration with Airplay 2 (the streaming technology used in the HomePod and Siri) and Apple Watch.[55] Apple also denied that it takes a 30% cut of Spotify's sales made through Apple's platform, stating that it takes a 15% portion of subscription fees for less than 1% of Spotify's subscribers.[56]

Store Review Guidelines, APPLE (June 3, 2019), https://developer.apple.com/news/?id=06032019j [https://perma.unl.edu/S89Z-VL84]; Jack Nicas, *Apple Backs off Crackdown on Parental-Control Apps*, N.Y. TIMES (June 3, 2019), https://www.nytimes.com/2019/06/03/technology/apple-parental-control-apps.html [https://perma.unl.edu/3AKT-A7TL] (last visited June 29, 2019).

49. *See infra* subsection III.D.2.
50. Carl Shapiro, *Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets*, 33 J. ECON. PERSPS. 69, 84 (2019).
51. David S. Evans, *Governing Bad Behavior by Users of Multi-Sided Platforms*, 27 BERKELEY TECH. L.J. 1201 (2012).
52. Press Release, Apple, The Facts About Parental Control Apps (Apr. 28, 2019), https://www.apple.com/newsroom/2019/04/the-facts-about-parental-control-apps/ [https://perma.unl.edu/32B4-FK4H].
53. Press Release, Spotify, Consumers and Innovators Win on a Level Playing Field (Mar. 13, 2019), http://newsroom.spotify.com/2019-03-13/consumers-and-innovators-win-on-a-level-playing-field/ [https://perma.unl.edu/T3UA-KU92].
54. *Id.*
55. Press Release, Apple, Addressing Spotify's Claims, http://apple.com/uk/newsroom/2019/03/addressing-spotifys-claims/ [https://perma.unl.edu/4ZHJ-FX9R].
56. Jacob Kastrenakes, *Apple Cites Irrelevant Spotify Subscription Stats in New Antitrust Defense*, THE VERGE (June 24, 2019), https://www.theverge.com/2019/6/24/

3. *Online Marketplaces*

Amazon is a popular platform that connects users and independent merchants. However, Amazon is also active in the supply of private label products (for example, its Amazon Basics range), and thus competes with its merchants in some product lines. In a popular article, Khan accuses Amazon of "cross-leverag[ing] market advantages across distinct lines of business" in ways that the current antitrust framework does not anticipate.[57] The European Commission[58] and Italian[59] and Luxembourgish[60] competition authorities are investigating Amazon's activity in this sphere. The German and Austrian authorities closed investigations into Amazon's treatment of merchants in July 2019, after securing changes in Amazon's terms of business with merchants.[61] The Italian authority is investigating whether Amazon discriminates against merchants that do not use Amazon's logistics services. Meanwhile, the EC is investigating whether Amazon is leveraging the sales data that it collects from its merchants to privi-

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18715719/apple-spotify-eu-antitrust-complaint-response [https://perma.unl.edu/N7EE-ZQ7N].

57. Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 717 (2017).

58. European Commission Press Release IP/42/91, Antitrust: Commission Opens Investigation into Possible Anti-Competitive Conduct of Amazon (July 17, 2019) [hereinafter EC Amazon Press Release]; *see also* Margrethe Vestager, Speech at CEPS Corporate Breakfast: Getting the Best out of Technology (Sept. 10, 2018) ("[S]ome platforms . . . might collect sensitive data about products that are sold by others through the marketplace. And they might use that data to boost their own sales of the same products, at the expense of sellers on the marketplace. So we're looking right now to see if there is a real issue here under the competition rules.").

59. Press Release, Autorità Garante della Concorrenza e del Mercato, Amazon: Investigation Launched on Possible Abuse of a Dominant Position in Online Marketplaces and Logistic Services (Apr. 16, 2019), https://en.agcm.it/en/media/press-releases/2019/4/Amazon-investigation-launched-on-possible-abuse-of-a-dominant-position-in-online-marketplaces-and-logistic-services [https://perma.unl.edu/3QPF-AJ98].

60. Press Release, Counseil de la Concurrence, Enquête sur les Services de Plateforme en Ligne (Apr. 2, 2019), https://concurrence.public.lu/dam-assets/fr/actualites/2019/2019-4-1-Communique-services-en-ligne-.pdf [https://perma.unl.edu/L9DT-NXG2] [Google translation]. The exact conduct under investigation is not yet known, but the authority has invited submissions from retailers that distribute through Amazon's platform.

61. In Germany, see Press Release, Bundeskartellamt, Bundeskartellamt Obtains Far-reaching Improvements in the Terms of Business for Sellers on Amazon's Online Marketplaces (July 17, 2019), https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/17_07_2019_Amazon.html [https://perma.unl.edu/XUD9-NA6F] [hereinafter Bundeskartellamt Amazon Press Release]. In Austria, see Press Release, Bundeswettbewerbsbehörde, BWB informiert: Amazon ändert Geschäftsbedingungen (July 17, 2019), https://www.bwb.gv.at/news/detail/news/bwb_informiert_amazon_aendert_geschaeftsbedingungen/ [https://perma.unl.edu/EQN8-XJGT] [Google translation].

lege its own offerings.[62] When sellers transact with consumers through Amazon's platform, Amazon accumulates the associated sales data and allegedly uses this data to determine which companies' offerings appear in Amazon's "Buy Box," which is displayed prominently on Amazon. The EC alleges that the Buy Box "seems key for marketplace sellers as a vast majority of transactions are done through it."[63] The FTC is rumored to be gearing up for an investigation into Amazon's business practices, too.[64] The specific conduct to be scrutinized is unknown, although Joseph Simons, chairman of the FTC, has stated that Amazon's favoring of its own products in search results rankings may be "problematic."[65]

Of course, if Amazon's products (or whichever firm's products are displayed most prominently to users) are cheaper or better than those of rival firms, there is no tractable consumer harm. But critics allege that Amazon's conduct may have negative effects in the long run because dependence on Amazon for distribution may no longer be a viable business model.[66] On the other hand, it is prima facie in Amazon's interests to have as many merchants distributing through Amazon as possible, as this increases the value of Amazon as an e-commerce platform. The share of sales that independent merchants account for on its platform has increased from 30% in 2008 to 58% in 2018, which Amazon puts down to its investment in "the very best selling tools [it] could imagine and build" for independent merchants.[67] Notably, in April 2019 Amazon redesigned its platform interface so that certain promi-

62. EC Amazon Press Release, *supra* note 58.

63. *Id.*

64. Tony Romm, *Amazon Could Face Heightened Antitrust Scrutiny Under a New Agreement Between U.S. Regulators*, WASH. POST (June 1, 2019), https://www.washingtonpost.com/technology/2019/06/02/amazon-could-face-heightened-antitrust-scrutiny-under-new-agreement-between-us-regulators/ [https://perma.unl.edu/D6UR-PBMF].

65. Richard Waters, *US Regulator Says Amazon Search Algorithm May Be 'Problematic'*, FIN. TIMES (Sept. 17, 2019), https://www.ft.com/content/b724374c-d99a-11e9-8f9b-77216ebe1f17 [https://perma.unl.edu/VB9W-EERR]. For further background on this allegation, *see* Dana Mattioli, *Amazon Changed Search Algorithm in Ways That Boost Its Own Products*, WALL ST. J. (Sept. 16, 2019), https://www.wsj.com/articles/amazon-changed-search-algorithm-in-ways-that-boost-its-own-products-11568645345 [https://perma.unl.edu/KM77-9NDX].

66. *See, e.g.*, Olivia Solon, *As Tech Companies Get Richer, Is It 'Game Over' for Startups?*, THE GUARDIAN (Oct. 20, 2017), https://www.theguardian.com/technology/2017/oct/20/tech-startups-facebook-amazon-google-apple [https://perma.unl.edu/SHZ2-7BHA] (quoting a source as stating that new startups "are not getting funded because Amazon might one day compete with them").

67. Letter from Jeff Bezos, Founder and Chief Executive Officer, Amazon.com, Inc., to Shareholders of Amazon.com, Inc. 1 (Apr. 11, 2019), https://ir.aboutamazon.com/static-files/4f64d0cd-12f2-4d6c-952e-bbed15ab1082 [https://perma.unl.edu/8GCC-T2CF].

nent areas (like the top of search results) were no longer devoted solely to Amazon private-label products.[68]

4. Social Media

Facebook is primarily a social media platform where users connect to their friends and family. However, Facebook is also integrated into various adjacent services, such as local buy-and-sell, video streaming and job listings. Facebook also facilitates the development of third-party applications that are built around the Facebook platform and integrated with it to various degrees. Facebook makes its "Graph" API available to software developers, which enables them to access an array of user-data once users authenticate using their Facebook login details.[69] This expands the range of complementary software products that can be built around the Facebook ecosystem.

However, Facebook has been accused of excluding some third parties from distributing software applications that rely on Facebook's data because "Facebook was looking to offer replica services itself."[70] In one instance, Facebook shut off API access to a developer whose application scanned users' photos for bikinis.[71] There is an obvious economic justification for this, namely that facilitating the production of such an invasive application would reduce the value of the Facebook platform due to users' negative reactions and privacy concerns.[72] Similarly, in December 2018 it came to light that Mark Zuckerberg, Facebook's founder and CEO, personally approved blocking the access of Vine (owned by Twitter) to data that enabled it to provide a friend-finding feature in its video app.[73] Ironically, Twitter has itself been accused of similar practices. For example, the company raised con-

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68. Eugene Kim, *Amazon Quietly Removes Promotional Spots that Gave Special Treatment to Its Own Products as Scrutiny of Tech Giants Grows*, CNBC (Apr. 3, 2019), https://www.cnbc.com/2019/04/03/amazon-removes-special-promo-spots-for-private-label-products.html [https://perma.unl.edu/5P2H-J7SN].
69. *Graph API*, FACEBOOK, https://developers.facebook.com/docs/graph-api [https://perma.unl.edu/Y8BW-K2G9] (last visited Aug. 29, 2019).
70. Lina M. Khan (@linamkhan), Twitter (June 6, 2018, 1:25PM), https://twitter.com/linamkhan/status/1004428988851335168 [https://perma.unl.edu/FPR4-QG5N].
71. *See* Kurt Wagner, *Here's Why an App for Finding Bikini Pics Is Facebook's Latest Headache*, VOX RECODE (Nov. 29, 2018), https://www.recode.net/2018/11/29/18118369/facebook-six4three-lawsuit-explained-pikinis-sealed-documents [https://perma.unl.edu/V5JU-QRJN].
72. On platform owners' need to regulate bad behaviour within platform ecosystems, *see* Evans, *supra* note 51, at 1201.
73. Adi Robertson, *Mark Zuckerberg Personally Approved Cutting off Vine's Friend-Finding Feature*, THE VERGE (Dec. 5, 2018), https://www.theverge.com/2018/12/5/18127202/mark-zuckerberg-facebook-vine-friends-api-block-parliament-documents [https://perma.unl.edu/2Q43-UQYQ] (last visited June 29, 2019). According to documents seized by a UK parliamentary committee, a Facebook executive wrote to other senior management personnel, "Twitter launched Vine today, which lets you shoot multiple short video segments to make one single, 6-second

cerns among developers in 2015 when it shut off API access to Meerkat, a livestreaming application, shortly after Twitter acquired Periscope, a rival company.[74] Earlier, in 2012, Twitter shut off the access of Instagram (now owned by Facebook) to Twitter's own friends-related API.[75]

In July 2019, Facebook revealed in regulatory filings that it had become the subject of an antitrust investigation by the FTC in June 2019; as yet, the specific allegations are unknown.[76]

Separately, Facebook has been accused of "appropriating" functionality from competitors. For example, it produced an alternative to SnapChat's "Stories" feature and bundled it with Facebook, Facebook Messenger, and Instagram.[77] However, this conduct does not fit neatly into our framework of a vertically integrated platform privileging its downstream offering over those of its rivals *within* the platform environment. This debate falls properly within the realm of the appropriate limits of intellectual property law (which, though a facet of wider competition policy, is an entirely different beast).

This section has shown that there is a growing debate about the activities of platform owners such as GAFA in lines of business that are ancillary to their core offerings. It has exemplified these concerns by reference to real-life examples. Different stakeholders take dramatically different stances on these issues, as we shall see. This includes

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video . . . Unless anyone raises objections, we will shut down their friends API access today," to which Zuckerberg responded, "Yup, go for it."

74. Seth Fiegerman, *Twitter's Meerkat Crackdown Reignites Concerns Among Developers*, MASHABLE (Mar. 16, 2015), https://mashable.com/2015/03/16/twitter-developers-meerkat-sxsw/?europe=true [https://perma.unl.edu/QM24-3F4F] (last visited Aug. 29, 2019).

75. Adi Robertson, *Twitter Blocks Instagram From Using its API for Friend-Finding Feature*, THE VERGE (July 26, 2012), https://www.theverge.com/2012/7/26/3189340/twitter-blocks-instagram-friend-finding-api [https://perma.unl.edu/HC6Q-CNX6] (last visited Aug. 29, 2019).

76. *Facebook Reports Second Quarter 2019 Results*, FACEBOOK (July 24, 2019), https://s21.q4cdn.com/399680738/files/doc_financials/2019/Q2/FB-Q2-2019-Earnings-Release.pdf [https://perma.unl.edu/789V-6WBJ]. According to one report, the allegations concern Facebook's acquisition strategy. *See* Brent Kendall, John D. McKinnon & Deepa Seetharaman, *FTC Antitrust Probe of Facebook Scrutinizes Its Acquisitions*, WALL ST. J. (Aug. 1, 2019), https://www.wsj.com/articles/ftc-antitrust-probe-of-facebook-scrutinizes-its-acquisitions-11564683965 [https://perma.unl.edu/FN4Z-WV9A].

77. Interview by Joe Nocera with Hal Singer, Managing Director at Econ One Research and Adjunct Professor at McDonough School of Business, Georgetown University (Mar. 22, 2019), https://www.washingtonpost.com/business/on-small-business/how-to-fix-big-tech-without-breaking-it-up/2019/03/22/bc19eeee-4ca6-11e9-8cfc-2c5d0999c21e_story.html [https://perma.unl.edu/V6T4-52QV] ("[Facebook] go around and figure out what you do outside of Facebook, and if you spend too much time outside, they have their engineers copy the functionality of an independent app and bring it into the mothership. Snapchat is the classic example.").

those who believe that antitrust law, as influenced by the Chicago School's consumer welfare framework, is perfectly capable of tackling anti-competitive leverage in the digital economy. The next Part examines the treatment of adjacent market entry and leveraging in antitrust law.

III. LEVERAGING IN ANTITRUST LAW

A. The Historical Origins of the Leverage Doctrine

In the first half of the twentieth century, antitrust law was overwhelmingly opposed to both vertical integration and leveraging conduct (which, as discussed in the Introduction, are distinct phenomena). As Professor Herbert Hovenkamp points out, antagonism towards vertical integration rose from "the Great Depression, which bankrupted thousands of small unintegrated firms and produced a political firestorm of campaigning against vertically integrated enterprises such as chain stores."[78] By the late 1930s and 1940s, vertical integration was seen as "inherently monopolistic."[79] In an infamous 1962 decision, the Supreme Court blocked a vertical merger where neither firm had a market share sufficient to demonstrate market power.[80] In the Court's reasoning, the leverage doctrine took center stage. The Court held that

> [t]he primary vice of a vertical merger or other arrangement tying a customer to a suppler is that, by foreclosing the competitors of either party from a segment of the market otherwise open to them, the arrangement may act as a 'clog on competition,' which 'deprive[s] . . . rivals of a fair opportunity to compete.'[81]

This tendency to conflate adjacent market entry with the ability and incentive to engage in anti-competitive leverage is important, not least because the idea that vertically integrated firms will, without more, have the ability and incentive to leverage anti-competitively is the central hypothesis underpinning Neo-Brandeisians' proposal to block adjacent market entry by digital platform owners.

Leverage as a theory of abuse of monopoly power, though originally founded in patent law,[82] was first applied in an antitrust setting by

78. *See* Herbert Hovenkamp, *Robert Bork and Vertical Integration: Leverage, Foreclosure, and Efficiency*, 79 ANTITRUST L.J. 983, 988 (2014).
79. *Id*. at 989.
80. Brown Shoe Co., Inc. v. United States, 370 U.S. 294 (1962).
81. *Id*. at 323–24 (citations omitted).
82. *See* Henry v. A.B. Dick Co., 224 U.S. 1, 53 (1912) (White, C.J., dissenting) (holding that a patentee of a machine that fastened buttons onto shoe-holders should be prohibited from selling the machine on the condition that purchasers also buy the patentee's wire for the machine, because it would enable the patentee "to extend his patent rights so as to bring within the claims of his patent things which are not embraced therein" and thereby "multiply monopolies"); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 517–18 (1917) (holding

Justice Louis Brandeis in the 1931 judgment of *Carbice Corp. of Am. v. Patents Dev. Corp*.[83] The defendant, which held a patent over a refrigeration container, compelled purchasers of its container to also buy its unpatented dry ice. Giving the majority opinion, Justice Brandeis held that such licensing restrictions "were beyond the legitimate scope of [the patentee's] monopoly" and thus were illegal under the patent misuse doctrine.[84] Justice Brandeis also held, albeit *obiter*, that the conduct constituted "a direct violation of the Anti-Trust Acts."[85] In subsequent antitrust cases, the Supreme Court applied the leverage doctrine in its *ratio decidendi*. In 1936, in *Int'l Bus. Machs. v. United States*, IBM tied[86] the purchase of its business machines to the sale of punch cards.[87] The Supreme Court condemned the arrangement, holding that it served to "create a monopoly in the production and sale of tabulating cards suitable for [IBM's] machines."[88] In 1947, in *Int'l Salt Co. v. United States*, the Supreme Court found that that the tying of unpatented salt to patented salt machines constituted violations of § 1 Sherman Act and § 3 Clayton Act.[89] Justice Jackson, in his majority opinion, held that the legal "limited monopoly" inherent in the patents conferred "no right to restrain use of, or trade in, unpatented salt."[90] The effect of the tying arrangement was to "close [the] market for salt against competition," which constituted "a restraint of trade for which [the patentee's] patents afford[ed] no immunity from the anti-trust laws."[91] Two years later, in 1949, the Supreme Court famously decreed that "tying agreements serve hardly any purpose be-

that exploiting market power to force the sale of unpatented products would enable the patentee to "create a monopoly in the [adjacent market] wholly outside of the patent in suit and of the patent law as we have interpreted it."). Professor Herbert Hovenkamp traces the leverage doctrine in patent law back to the case of *Bloomer v. Millinger*, 68 U.S. 340, 350 (1863). *See* Hovenkamp, *supra* note 78, at 992 ("The [leverage] idea originated in nineteenth century decisions developing the 'first sale,' or patent exhaustion doctrine, which postulated that by imposing restraints on a patented good after it was sold, a patent holder could leverage its position to extract revenues beyond what the Patent Act authorized. In its 1863 decision *Bloomer v. Millinger*, the Supreme Court held that patentees 'are entitled to but one royalty for a patented machine.' This 'double royalty' or 'leveraging' critique has been a prominent part of first sale jurisprudence ever since.").

83. Carbice Corp. v. Patents Dev. Corp., 283 U.S. 27 (1931).
84. *Id.* at 31–32.
85. *Id.* at 34 n.4.
86. A tying arrangement, or tie-in sale, can be defined as "an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier." N. Pac. Ry. Co. v. United States, 356 U.S. 1, 5–6 (1958).
87. Int'l Bus. Machs. Corp. v. United States, 298 U.S. 131 (1936).
88. *Id*. at 136.
89. Int'l Salt Co. v. United States, 332 U.S. 392 (1947).
90. *Id.* at 395–96.
91. *Id*. at 396.

yond the suppression of competition."[92] For the Court, the "essence of illegality in tying agreements [was] the wielding of monopolistic leverage."[93]

The Supreme Court zealously applied the leverage doctrine throughout the twentieth century, holding that tying arrangements were *per se* illegal with scant room for business justification. In *Fortner Enters., Inc. v. United States Steel Corp.*, for example, the Supreme Court held that tying arrangements "deny competitors free access to the market for the tied product *not because the party imposing the tying requirements has a better product or a lower price*, but because of his *power or leverage in another market*."[94] This reveals an inherent presumption in the leverage doctrine that there were no pro-competitive motivations for tying arrangements. Prominent antitrust scholars agreed with the premise of the leverage doctrine, concluding that "tying tends to spread market power into markets where it would not otherwise exist."[95] Indeed, the intuition is easy to grasp and attractive to swallow: naturally, "two monopolies are better than one."[96]

B. The Chicago Critique of the Leverage Doctrine

It was not until the 1950s that scholars in law and economics associated with the University of Chicago started to question the veracity of the leverage doctrine and the *per se* illegality of tying, vertical mergers, and other leveraging behavior.[97] Perhaps the most famous Chicago insight was the idea that a monopolist could not earn additional monopoly profits in an adjacent market by leveraging into it (the "single monopoly profit theorem"). Take the markets for Product A (monopolized) and Product B (perfectly competitive). Chicago scholars pointed out that the monopolist is already charging a profit-maximizing price for Product A. If the monopolist ties Products A and B together, assuming that Products A and B are used in fixed proportions, the consumer would regard any increase in the price of Product B

92. Standard Oil Co. v. United States, 337 U.S. 293, 305 (1949); *see also Int'l Salt*, 332 U.S. at 396 ("[T]he tendency of the [tying] arrangement to accomplishment of monopoly seems obvious.").
93. Times-Picayune Publ'g Co. v. United States, 345 U.S. 594, 611 (1953).
94. *See, e.g.*, Fortner Enters., Inc. v. United States Steel Corp., 394 U.S. 495, 498–99 (1969) (emphasis added).
95. CARL KAYSEN & DONALD F. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 157 (1965).
96. RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 174 n.8 (1976).
97. Aaron Director is often credited as the original proponent of the Chicago critique, and numerous subsequent critics were students of Director at the University of Chicago Law School. *Id*. at 173. Director's only published reference to his critique of leverage appears in Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281 (1956). However, scholars have pointed out that the Chicago critique was understood years prior to its wider dissemination. *See, e.g.*, Kaplow, *supra* note 5, at 518 n.12.

above the competitive level as an increase in the entire package, and thus demand and profits would fall below the monopolist's optimal level.[98] The monopolist therefore has no incentive to leverage into the market for Product B in order to make that market less competitive.[99] Chicago scholars applied this theorem to undermine antitrust law's hostility towards both vertical integration and leveraging behavior, such as tying arrangements.[100]

Instead, as the Chicago scholars pointed out, vertical integration and leveraging conduct are predominantly motivated by efficiency, resulting in higher quality or lower prices than prevail if, in the case of vertical integration, two firms enter into a contract, or, in the case of leveraging, the primary good is combined with a third-party complementary good. Chicagoans' central criticism of Supreme Court case law was that the conduct concerned should in fact be legal, even if it excludes competitors in the adjacent market, because consumers benefit from the introduction of product improvements and lower prices.[101] It is not the goal of antitrust law to protect less efficient producers of the adjacent good from the natural forces of competition, even if it means that an existing monopolist becomes a monopolist over another product too. Such a tolerance for unregulated private monopoly in circumstances where technical considerations, such as superior efficiency, can elevate successful firms to monopoly status can be traced through to the neoliberal policy prescriptions of the University of Chicago's wider economics and policy scholars, such as Milton

98. Bowman, *supra* note 6, at 23 ("Where fixed proportions are involved, no revenue can be derived from setting a higher price for the tied product which could not have been made by setting the optimum price for the tying product.").

99. *See* POSNER, *supra* note 96, at 173 (explaining that the leverage theory fails to "explain why a firm with a monopoly of one product would want to monopolize complementary products as well.").

100. ROBERT H. BORK, THE ANTITRUST PARADOX 373 (2d ed. 1993) ("The tying arrangement, whatever else it may accomplish, is obviously not a means of gaining two monopoly profits from a single monopoly."). In the vertical integration context, Bork argued that, "[i]f, for example, a firm operates at both the manufacturing and retailing levels of an industry, it maximizes overall profit by setting the output at each level as though the units were independent of one another . . . The firm will not, as is frequently suggested, sell to its own retail subsidiary for less than it sells to outsiders, unless the efficiencies of integration lower the cost of selling to its own retail unit." *Id.* at 228.

101. Chicago scholars also pointed out that, when tied products are used in variable proportions, tying enables the dominant firm to price discriminate by metering consumption of the tied product. *See* POSNER, *supra* note 96, at 173–74. As Bork explained, in criticizing *International Business Machines*, purchasers of IBM's machines were in fact "paying for the machines in the price of the cards." Because "heavy users are generally willing to pay more than those whose use is less intensive," IBM could reduce the price of its machines and increase the price of the tied cards, such that each customer had to "pay a price for the machine in direct proportion to his use of it." This maximized IBM's profits through price discrimination. *See* BORK, *supra* note 100, at 377.

Friedman.[102] Thus, while the conduct still constitutes *leverage*, because the monopolist has moved from the primary market to the adjacent market with a view to gaining market power in the latter market, it is not *anti-competitive* because the market power gained is the result of "superior skill, foresight, and industry."[103] This is *pro-competitive leveraging*, a form of competition on the merits.[104] Consumers are better off because they benefit from lower prices or higher output or quality. On the other hand, *anti-competitive leveraging* occurs when a monopolist privileges its adjacent product (through tying, exclusive dealing, etc.) in circumstances where consumers would prefer to deal with a rival producer in the adjacent market.[105] Here, leverage suppresses competition without consumer benefits and is properly considered illegal. Prior to the Chicago critique, this distinction between pro- and anti-competitive leveraging was ignored by courts in their treatment of leveraging conduct as *per se* illegal. On the other hand, Chicagoans recognized both the legitimacy of pro-competitive leverage *and* the frequency with which it was engaged by firms with and without market power.

C. The Impact of the Chicago Critique on Adjacent Market Entry and Leveraging

The Chicago critique of the leverage doctrine had a significant impact on antitrust law's stance on vertical integration. Indeed, the mere

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102. According to Friedman, when monopolies arise inevitably because "technical considerations make it more efficient or economical to have a single enterprise . . . the least of the evils is private unregulated monopoly." This is because "[d]ynamic changes are highly likely to undermine" such monopolies, while governmental intervention is "exceedingly difficult to reverse." MILTON FRIEDMAN, CAPITALISM AND FREEDOM 128 (3d ed. 2002). Friedman later took the extreme position that antitrust law should be abolished, as its positive effects (promoting competition) were outweighed by its negative effects (impeding competition due to regulatory capture). *See* MILTON FRIEDMAN, CATO INSTITUTE, POLICY FORUM: MILTON FRIEDMAN ON BUSINESS SUICIDE, 21(1) CATO POL'Y REP. (1999), https://www.cato.org/policy-report/marchapril-1999/policy-forum-milton-friedman-business-suicide [https://perma.unl.edu/8P7G-X5T5].

103. United States v. Aluminum Co., 148 F.2d 416, 430 (2d Cir. 1945); *see also* United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966) (defining illegal monopolization under the Sherman Act as "the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.").

104. O'DONOGHUE & PADILLA, *supra* note 8, at 251 (describing "[t]he need to distinguish procompetitive and anticompetitive leveraging.").

105. BORK, *supra* note 100, at 345 (praising the Supreme Court decision in *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951), where a monopolist newspaper company prevented its advertisers from also advertising on local radio. Bork concluded that *Lorain Journal* was "entirely correct," reasoning that the defendant had "an overwhelming market share and a clearly displayed predatory intent." Moreover, there was "no apparent efficiency justification for its conduct.").

presence of a firm in two related or complementary markets is now generally considered benign, absent a showing that the firm has the ability or incentive to engage in predatory or exclusionary conduct.[106] As the D.C. Circuit has held, "absent market power, vertical integration and vertical contracts are *procompetitive*" because they "encourage product innovation, lower costs for businesses, and create efficiencies—and thus reduce prices and lead to better goods and services for consumers."[107] In embracing the fact that "vertical integration creates efficiencies for consumers,"[108] the DOJ and FTC's 1984 Non-Horizontal Merger Guidelines recognize that vertical mergers "'are not invariably innocuous,' but instead can generate competitive harm '[i]n certain circumstances.'"[109] This stands in stark contrast to the 1968 Non-Horizontal Guidelines, which espoused the verdict that vertical mergers "usually raise entry barriers or disadvantage competitors to an extent not accounted for by, and wholly disproportionate to, such economies as may result from the merger."[110] In reflection of the sea change that took place in vertical merger policy in the wake of the Chicago critique, the District of Columbia District Court's 2018 review of AT&T's acquisition of Time Warner constituted the first vertical merger case that the DOJ had litigated in 40 years, as District Judge Richard Leon was quick to recognize.[111]

However, the Chicago critique's impact on leveraging law and policy has been relatively mixed, considering that some Chicago scholars, most notably Robert Bork and Richard Posner, called for *per se* legality of tying arrangements.[112] On one hand, leveraging by refusing to

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106. *See, e.g.*, Comcast Cable Commc'ns, LLC v. FCC, 717 F.3d 982, 990 (D.C. Cir. 2013) (citing, *inter alia*, ROBERT H. BORK, THE ANTITRUST PARADOX 226 (1st ed. 1978) for the proposition that "[v]ertical integration and vertical contracts in a competitive market encourage product innovation, lower costs for businesses, and create efficiencies—and thus reduce prices and lead to better goods and services for consumers.").

107. *Id.* (emphasis original); *see also* Tenneco Gas v. FERC, 969 F.2d 1187, 1201 (D.C. Cir. 1992) ("[A]dvantages a pipeline gives its affiliate are improper only to the extent that they flow from the pipeline's anti-competitive market power. Otherwise vertical integration produces permissible efficiencies that cannot by themselves be considered uses of monopoly power.") (internal quotation marks omitted); BORK, *supra* note 100, at 226 ("[V]ertical integration is indispensable to the realization of productive efficiencies").

108. Nat'l Fuel Gas Supply Corp. v. FERC, 468 F.3d 831, 840 (D.C. Cir. 2006).

109. United States v. AT&T Inc., 310 F.3d 161, 194 (D.D.C. 2018) (quoting U.S. Dept. of Justice & Fed. Trade Comm'n, Non-Horizontal Merger Guidelines § 4.0 (1984)).

110. U.S. Dep't of Justice, Merger Guidelines (1968); *accord* Hovenkamp, *supra* note 78, at 990–91.

111. *AT&T Inc.*, 310 F.3d at 193.

112. BORK, *supra* note 100, at 367 (arguing that it was unjust and erroneous for the existence of a tie-in sale to constitute "conclusive proof that the seller is wielding leverage."); POSNER, *supra* note 96, at 182 ("The prohibition against tie-in sales

grant access to an input to one's competitors (i.e., a refusal to deal) is "at or near the outer boundary" of antitrust law after the Supreme Court's ruling in *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, which reaffirmed "the long recognized right of [a] trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal."[113] In the same case, the Supreme Court resolved a Circuit split[114] as to whether "monopoly leveraging" constituted a standalone theory of antitrust harm, debasing the debate by knocking the theory out in a footnote.[115]

On the other hand, the influence of the Chicago critique on tying law was much less successful.[116] The Supreme Court did, albeit only

ought to be radically curtailed, and in the absence of a general prohibition of systematic price discrimination eliminated.").

113. Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 408–09 (2004).

114. *Compare* Schor v. Abbott Labs., 457 F.3d 608, 611-15 (7th Cir. 2006) (rejecting "monopoly leveraging" as a standalone theory of anti-competitive harm), In re Indep. Serv. Orgs. Antitrust Litig., 203 F.3d 1322, 1327 (Fed. Cir. 2000) (holding that a monopoly leveraging argument must be "viewed within the framework of a tying case"), Willman v. Heartland Hosp. E., 34 F.3d 605, 613 (8th Cir. 1994) (assuming *arguendo* "that monopoly leveraging is a cognizable section two claim"), *and* Advanced Health-Care Servs. Inc. v. Radford Cmty. Hosp., 910 F.2d 139, 149 n.17 (4th Cir. 1990) (reserving judgment as to whether "monopoly leveraging is an independent § 2 violation separate from monopolization and attempted monopolization . . . for a case in which the issue is squarely presented."), *with* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 275 (2d Cir. 1979) ("It is clear that a firm may not employ its market position as a lever to create—or attempt to create—a monopoly in another market. . . . Berkey . . . contends that Kodak illicitly gained an advantage in [adjacent markets] by leveraging its power over film and cameras. Accordingly, we must determine whether a firm violates § 2 by using its monopoly power in one market to gain a competitive advantage in another, albeit without an attempt to monopolize the second market. We hold, as did the lower court, that it does."), *and* Image Tech. Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1208 (9th Cir. 1997) (interpreting the Supreme Court in *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992) as endorsing a monopoly leveraging theory of harm).

115. *See Trinko*, 540 U.S. at 415 n.4 ("[L]everaging presupposes anticompetitive conduct, which in this case could only be the refusal-to-deal claim we have rejected."); Four Corners Nephrology Assocs. v. Mercy Med. Ctr., 582 F.3d 1216, 1222 (10th Cir. 2009) (citing *Trinko* and rejecting a monopoly leveraging theory where there is no viable claim for anti-competitive conduct like a refusal to deal); Nicholas Economides, *Vertical Leverage and the Sacrifice Principle: Why the Supreme Court Got* Trinko *Wrong*, 61 N.Y.U. ANN. SURV. AM. L. 379, 407 (2005) (noting that the Supreme Court in *Trinko* "dismissed the vertical leveraging claim based on the fact that it had dismissed the horizontal claim, as if the vertical claim could not stand on its own."). Nevertheless, the notion of monopoly leveraging continues to plague the lower courts. *See, e.g.*, Viamedia, Inc. v. Comcast Corp., 218 F. Supp. 3d 674, 695-96 (N.D. Ill. 2016).

116. Richard Schmalensee, *Thoughts on the Chicago Legacy in U.S. Antitrust*, *in* HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST 11, 21–22 (Robert Pitofsky ed., 2008) (noting

in 2006, depart from the longstanding proposition that tying arrangements "serve hardly any other purpose beyond the suppression of competition."[117] However, the Court did not abandon the "modified *per se* illegality" standard that prevails under the Supreme Court ruling in *Jefferson Parish Hosp. Dist. v. Hyde*.[118] Indeed, circuit courts still refer to the leverage doctrine as the theoretical rationale for the modified *per se* rule.[119] The Supreme Court confirmed its adherence to the leverage doctrine in *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, noting that the Court had "held many times that power gained through some natural and legal advantage such as a patent, copyright, or business acumen can give rise to liability if 'a seller exploits his dominant position in one market to expand his empire into the next.'"[120] In the late 1990s, the DOJ brought its landmark case against Microsoft for leveraging from the desktop operating system market to the internet browser market as a means of protecting its monopoly.[121] Interestingly, Bork batted for the complainants.[122]

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that, for tying arrangements, the Chicago School "mainly won in the seminar room but has made little headway in the courts.").

117. Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 36–45 (2006) ("Many tying arrangements . . . are fully consistent with a free, competitive market.").

118. Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984). In this case, the Supreme Court held that it was "far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition, and therefore are unreasonable 'per se.'" *Id.* at 9. That said, the Court acknowledged that "not every refusal to sell two products separately can be said to restrain competition." *Id.* at 11.

119. *See, e.g.*, Cascade Health Sols. v. PeaceHealth, 515 F.3d 883, 912 (9th Cir. 2008) ("Tying arrangements are forbidden on the theory that, if the seller has market power over the tying product, the seller can leverage this market power through tying arrangements to exclude other sellers of the tied product."); Town Sound & Custom Tops v. Chrysler Motors, 959 F.2d 468, 475–76 (3d Cir. 1992) ("The cases thus reveal a concern that a monopolist in the tying product market may use that leverage to garner sales in a second market, thereby foreclosing competitors and monopolizing the formerly competitive tied product market too . . . Although past cases have also spoken of the evils of foreclosing consumer choice . . . more recent Supreme Court cases have primarily concerned themselves with that danger when a seller leverages economic power from one market to another."); Brokerage Concepts, Inc. v. U.S. Healthcare, Inc., 140 F.3d 494, 502 (3d Cir. 1998) ("In a typical tying case, a seller leverages its market power in the market for the tying product to require the buyer of the product to purchase an unwanted product in the tied market, thereby (unlawfully) foreclosing competition in that market.").

120. Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 481 n.29 (1992) (quoting Times-Picayune Publ'g Co. v. United States, 345 U.S. 594, 611 (1953)). However, subsequent literature suggests that *Kodak*, which established the "aftermarket doctrine," has been limited in scope by lower courts. *See, e.g.*, David A.J. Goldfine & Kenneth M. Vorrasi, *The Fall of the* Kodak *Aftermarket Doctrine: Dying a Slow Death in the Lower Courts*, 72 ANTITRUST L.J. 209 (2004).

121. For an overview of the *United States v. Microsoft* saga, see WILLIAM H. PAGE & JOHN E. LOPATKA, THE MICROSOFT CASE: ANTITRUST, HIGH TECHNOLOGY, AND CONSUMER WELFARE (paperback ed. 2009).

Furthermore, the Chicago critique has been the subject of criticism in economic literature, which, starting in the 1990s, sought to rebut the policy implications of the single-monopoly profit theorem by showing that its assumptions were fragile and unrealistic. For example, if the adjacent market is subject to scale economies and the primary good is not required for all uses of the adjacent good, the primary market monopolist can, in certain circumstances, have the incentive to distort competition in the adjacent market and harm consumers in doing so.[123] Moreover, a monopolist may have the incentive to leverage anti-competitively into an adjacent market with the objective of preserving its position in the monopolized market (so-called "defensive leveraging").[124] This insight is important because often the primary way of unseating a dominant firm is to start off by entering an adjacent market.[125]

Economic models showing that monopolists may have the incentive to leverage in the absence of consumer benefits are now widespread (as one Chicago scholar admits[126]).[127] Indeed, in a popular article,

122. Robert H. Bork, *Full Text of Bork's "White Paper" on* DOJ vs. MS, ZDNET (July 29, 1998), http://www.zdnet.com/news/full-text-of-borks-white-paper-on-doj-vs-ms/100139 [https://perma.unl.edu/6CSV-BPC7] (arguing that Microsoft violated the Sherman Act by "leverag[ing] the OS . . . asset to make people use IE instead of Navigator." However, the case was "not an attack on vertical integration," nor was it an "objection to the coupling of [IE] and its Windows operating system." The concern was simply Microsoft's "attempt to preserve its monopoly by destroying a potential rival."). This highlights the fact that Bork was willing to adapt his policy views as the economic understanding of antitrust law progressed. As Bork wrote, there was "no acceptable theory of harm" in leveraging cases in the "present state of knowledge," but only "plausible theories of the good [tying arrangements] may do." *See* BORK, *supra* note 100, at 80-81. As mentioned in note 105, Bork agreed that the outcome in *Lorain Journal* was correct. Bork was therefore not adverse to illegality for exclusionary conduct that suppressed competition in an adjacent market without pro-competitive justification.

123. The seminal contribution was made in Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837 (1990). *See also* Dennis W. Carlton & Michael Waldman, *Upgrades, Switching Costs and the Leverage Theory of Tying*, 122 ECON. J. 675, 680 (2011) (showing that a primary monopolist can have the incentive to leverage anti-competitively even when the primary good is required to use the adjacent good).

124. Feldman, *supra* note 5. For a formal model, see Dennis W. Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND J. ECON. 194 (2002).

125. Randal C. Picker, *Platforms and Adjacent Market Competition: A Look at Recent History*, PRO-MARKET (Apr. 16, 2018), https://promarket.org/platforms-adjacent-market-competition-look-recent-history/ [https://perma.unl.edu/385R-UPYM]; Declaration of Carl Shapiro at 7, United States v. Microsoft Corp. 87 F. Supp. 2d 30 (D.D.C. 2000) (No. 98-1232) ("[N]etwork monopolies can be very strong, they are most vulnerable to attack by firms in a strong position in a widely-used complementary product.").

126. Richard A. Posner, *Vertical Restraints and Antitrust Policy*, 72 U. CHI. L. REV. 229, 231 n.6 (2005).

Professor Einer Elhauge proclaimed the "death" of the single monopoly profit theorem.[128] In addition, Post-Chicago scholars produced models showing that vertical mergers can, in certain circumstances, have anti-competitive effects, casting doubt on the Chicago position that vertical integration should be beyond scrutiny.[129] Steven Salop, a vocal proponent of increased vertical merger enforcement, writes that it has been the victim of "Chicago School economics and laissez-faire ideology."[130]

However, the fundamental contribution of the Chicago School was not, in this author's opinion, the single-monopoly profit theorem, which is correctly viewed as having little practical utility in analyzing specific real-world situations (though this is equally true of post-Chicago models). Chicago scholars' observation that adjacent market entry and leveraging are predominantly motivated by efficiency justifications to the benefit of consumers is far more significant. In this respect, the Chicago School's insights had a significant impact on leveraging cases. In *Jefferson Parish*, for example, the Supreme Court recast the test for illegal tying arrangements by explicitly including for the first time a requirement that the tying and tied goods are "separate products."[131] This criterion has been recognized as implicitly baking a gauge for measuring efficiencies from tying two products together into existing Supreme Court doctrine.[132] Furthermore, in *Kodak*, where Kodak was found to have illegally tied spare parts for its machines to repair services for its machines, the Supreme Court held

127. *See, e.g.*, Jay Pil Choi & Christodoulos Stefanadis, *Tying, Investments, and the Dynamic Leverage Theory*, 32 RAND J. ECON. 52 (2001); Barry Nalebuff, *Bundling as a Way to Leverage Monopoly* (Yale Sch. of Mgmt., Working Paper Series ES, No. 36, 2004) (on file with author); Barry Nalebuff, *Bundling as an Entry Barrier*, 119 Q. J. ECON. 159 (2004); Jay Pil Choi & Doh-Shin Jeon, *A Leverage Theory of Tying in Two-Sided Markets* (Ludwig-Maximilians Univ.'s Ctr. for Econ. Stud. & the Ifo Inst., Working Paper No. 6073, 2016) (on file with author); Federico Etro & Cristina Caffarra, *On the Economics of the Android Case*, 13 EUR. COMPETITION J. 282 (2017); Alexandre de Cornière & Greg Taylor, *Upstream Bundling and Leverage of Market Power* (May 18, 2018) (working paper) (on file with author) (finding that upstream bundling can reduce rivals' willingness to pay slotting fees and enable anti-competitive leverage).

128. See Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397 (2009).

129. *See, e.g.*, Janusz A. Ordover, Garth Saloner, & Steven C. Salop, *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127 (1990); Michael H. Riordan & Steven C. Salop, *Evaluating Vertical Mergers: A Post-Chicago Approach*, 63 ANTITRUST L.J. 513 (1995).

130. Salop, *supra* note 34, at 1963.

131. Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984).

132. United States v. Microsoft Corp., 253 F.3d 34, 87 (D.C. Cir. 2001). *See infra* subsection IV.B.3.

that the defendant's liability turned "on whether 'valid business reasons' can explain [its] actions."[133]

Fundamentally, as the Supreme Court has held, the monopolization offence under § 2 of the Sherman Act involves "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."[134] From this one can draw three constituent elements: monopoly power, some "bad act," and a lack of business justification.[135] The Supreme Court has also held that "[t]he purpose of the [Sherman] Act is not to protect businesses from the working of the market; it is to protect the public from the failure of the market,"[136] a sentiment that appears to place low prices and better products above the welfare of less efficient firms in the antitrust pecking order. Judge Frank Easterbrook, more mercilessly, has held that "injuries to rivals are byproducts of vigorous competition, and the antitrust laws are not balm for rivals' wounds."[137] This is because "Congress designed the Sherman Act as a 'consumer welfare prescription.'"[138] Applying these principles to leveraging conduct (whether or not achieved through tying) would accord with the Chicagoan idea that exclusionary conduct is not illegal if it results from conduct that benefits consumers, either through lower prices or higher quality.

D. Efficiency Justifications that Benefit Consumers

The observation that both adjacent market entry and leveraging can benefit consumers, even if in doing so they harm competing businesses in adjacent markets, was the fundamental contribution of the Chicago School. Indeed, even authors of pivotal Post-Chicago models consider that "the courts should impose a very high hurdle for finding an antitrust violation on the basis of the leverage argument."[139] This is due to the fact that leverage behavior is "typically driven by efficiency considerations, and it is difficult for the courts to accurately

133. Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 483 (1992) (quoting Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 600–05 (1985)).
134. United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966).
135. *See* Jonathan B. Baker, *Promoting Innovation Competition Through the* Aspen/Kodak *Rule*, 7 GEO. MASON L. REV. 495 (1999).
136. Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458 (1993); *see also* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993) (holding that antitrust law exists for "the protection of competition, not competitors.").
137. Ball Mem. Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325, 1338 (7th Cir. 1986).
138. Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (citing BORK, *supra* note 100, at 66); *see also* BORK, *supra* note 100, at 7 (arguing that the "only legitimate goal of antitrust is the maximization of consumer welfare.").
139. Dennis W. Carlton & Michael Waldman, *Robert Bork's Contributions to Antitrust Perspectives on Tying Behavior*, 57 J.L. & ECON. 121, 133–34 (2014).

judge this."[140] In other words, the frequency of pro-competitive leveraging far outstrips that of anti-competitive leverage.[141] This section demonstrates that efficiencies achieved through adjacent market entry and leveraging are ubiquitous in digital markets.

1. Efficiencies from Adjacent Market Entry

On one hand, there are efficiencies that flow from adjacent market entry by digital platform owners. Firstly, a platform owner (take an operating system) that charges a profit-maximizing price would prefer if downstream firms producing complementary products (take app developers) charged at cost (i.e., had no market power), so that output was not restricted even further by the imposition on consumers of markups at two levels of distribution.[142] When the platform owner integrates into the adjacent market, it can internalize the markup in the platform or adjacent market (as they are complements), exercising market power solely in one market. In these circumstances, "both consumers and firms are worse off with successive monopolies than when there is a single, integrated monopoly."[143] Traditionally, the efficiencies generated manifest themselves in the form of lower prices, but double-marginalization can also lead to better quality (for example, more intrusive levels of advertising).

Secondly, integrated firms are not subject to the opportunistic "hold up" behavior that can occur in the price system.[144] Say a plat-

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140. *Id.*

141. Keith N. Hylton & Michael A. Salinger, *Tying Law and Policy: A Decision-Theoretic Approach*, 69 ANTITRUST L.J. 469 (2001).

142. This phenomenon, known as double-marginalization, has been economic orthodoxy for nigh on two-hundred years. *See* AUGUSTIN COURNOT, RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH 103 (Nathaniel T. Bacon trans., MacMillan 1927) (1838).

143. CARLTON & PERLOFF, *supra* note 9, at 417; *see also* Joseph J. Spengler, *Vertical Integration and Antitrust Policy*, 58 J. POL. ECON. 347 (1950) (arguing that vertical integration is generally pro-competitive due to the elimination of double-marginalization). *But see* Glen Weyl, Double Marginalization in Two-Sided Markets (July 2008) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstractid=1324412 [https://perma.unl.edu/CW7W-84M6] (showing that vertical integration in two-sided markets may increase prices on the side of the market that is not subject to integration, focusing on banks and debit-clearing networks); *cf.* Mie la Cour Sonne, Vertical Integration in Two-Sided Markets (July 2012) (working paper) (showing similar results, but finding that welfare increases even when price increases).

144. R. H. COASE, *The Nature of the Firm*, *in* THE FIRM, THE MARKET, AND THE LAW 33 (1990) (suggesting that contractual hold-up affects firm boundaries); Benjamin Klein, Robert G. Crawford, & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297 (1978); Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J.L. & ECON. 233 (both suggesting vertical integration as a rational response to contractual hold-up). *But see* William P. Rogerson, *Contrac-*

form owner wants to embed mapping functionality in its platform software and contracts with a firm that specializes in such functionality. If the platform owner makes specific capital investments in tailoring its platform code to integrate with the third party's mapping software, the latter can then (threaten to) hold-up the platform owner and force it to increase the price it pays to license the mapping functionality, a cost that the platform owner will pass onto consumers. Integration into mapping functionality both solves this problem and serves as a threat to other suppliers that would otherwise engage in this sort of opportunistic post-contractual behavior.

Lastly, there may also be economies of scope or distribution that render a platform owner the most efficient producer of the adjacent product. The platform owner may invest in and develop certain pieces of software that can form the basis of multiple adjacent applications, lowering the cost of developing the latter.[145] Non-duplication of functionality can also improve performance.[146] Comparably, a platform owner's knowledge of software development, gained through the development of its core platform, can render it the most cost-effective producer of complementary components. If the platform owner can produce both the platform itself and a component for the platform at a lower cost than would prevail if a third party produced the component, consumers will benefit from lower prices and better quality.

Notwithstanding the above, to justify a less interventionist approach to adjacent market entry than existed prior to the influence of the Chicago School, it is insufficient to show that there are *potential* efficiencies—this must be supported by evidence that efficiencies occur frequently relative to anti-competitive harms. This view garners support from economic scholarship, in which there is a consensus that "[a] general presumption that vertical integration is pro-competitive is warranted by a substantial economics literature identifying efficiency benefits of vertical integration, including empirical studies demonstrating positive effects of vertical integration in various industries."[147] As Lafontaine and Slade found in their literature review, "under most circumstances, profit-maximizing vertical-integration decisions are efficient, not just from the firms' but also from the consum-

tual Solutions to the Hold-Up Problem, 59 REV. ECON. STUD. 777 (1992) (arguing that optimal contractual solutions to the hold-up problem generally exist).

145. United States v. Microsoft Corp., 253 F.3d 34, 87 (D.C. Cir. 2001) ("Bundling can also capitalize on certain economies of scope. A possible example is the 'shared' library files that perform OS and browser functions with the very same lines of code and thus may save drive space from the clutter of redundant routines and memory when consumers use both the OS and browser simultaneously.").

146. *Id*.

147. Michael H. Riordan, *Competitive Effects of Vertical Integration*, *in* Handbook of Antitrust Economics 48 (Paolo Buccirossi ed., 2008).

ers' points of view."[148] In a recent literature update, scholars of the Global Antitrust Institute found "continued support for the conclusion that vertical mergers and contractual restraints are generally procompetitive or competitively neutral."[149]

2. *Efficiencies from Leveraging*

On the other hand, there are efficiencies that stem from both adjacent market entry *and* leveraging conduct that privileges the platform owner's adjacent products within the platform ecosystem.

For example, there may be some added benefit of technically integrating two products to some degree that cannot be achieved through contracting in the price system or simply bolting one product onto another. Integrating Product A (the platform) and Product B (a new component) can create some new functionality in the form of Product C that users value and, crucially, could not achieve by combining Products A and B themselves (from one or multiple firms).[150] For example, Apple produces voice-assistant technology and mapping functionality and incorporates them with the rest of iOS and other applications to produce a more seamless user experience.[151] In a similar vein, the UK CMA, in approving Google's acquisition of Waze, was spurred in part by the fact that "[i]ntegration of a map application into the operating system creates opportunities for operating system developers to use their own or affiliated services (for example search engines and social networks) to improve the experience of users."[152] These integration efficiencies are beneficial both to users *and* third party distributors (such as app developers), who can depend upon certain functionalities forming part-and-parcel of the platform's substrata, and do not there-

148. Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629, 680 (2007); *see also* James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT. J. INDUS. ORG. 639 (2005).

149. Global Antitrust Institute, *Competition and Consumer Protections in the 21st Century, Vertical Mergers: Hearing Before the Fed. Trade Comm'n* (2018).

150. United States v. Microsoft Corp., 147 F.3d 935, 948 (D.C. Cir. 1998) (finding that "an 'integrated product' is most reasonably understood as a product that combines functionalities (which may also be marketed separately and operated together) in a way that offers advantages unavailable if the functionalities are bought separately and combined by the purchaser.").

151. Patrick F. Todd*, Out of the Box: Illegal Tying and Google's Suite of Apps for the Android OS*, 13 EUR. COMPETITION J. 62, 85 (2017) ("Apple's iOS comes pre-installed with its Maps app, which, over time, has become more fully integrated with the underlying OS as well as interoperating better with Apple's other pre-installed apps. Asking Siri (Apple's pre-installed virtual assistant) for directions to a specific location immediately reverts the user to Apple Maps. Creating a location-specific event in iCal (Apple's pre-installed calendar) allows the user to receive notifications about travel-time (again using Maps).").

152. Office of Fair Trading, Completed Acquisition by Motorola Mobility Holding (Google, Inc.) of Waze Mobile Limited, 2013, ME/6167/13, ¶ 28 (UK).

fore need to replicate that functionality in their own products or services.[153]

There are many other potential pro-competitive justifications for leveraging. For example, distributing together or technically integrating two products can protect the platform owner's reputation by ensuring that it is not unduly punished for malfunctions that occur when the platform is combined with a substandard adjacent good.[154] This explains why Apple bundles its own applications with its mobile OS and has strict rules for third-party application developers that distribute through Apple's App Store. Moreover, software integration can decrease consumer search costs by providing them with functionality or end results that they seek more quickly and efficiently. In 2016 the High Court of England and Wales (which follows EU competition jurisprudence) found that Google was justified in incorporating Google Maps into its search results pages in response to geographical search queries.[155] The Court took as its starting point the consumer-focused standard that dominant firms are "able, and indeed should be encouraged, to compete" in adjacent markets even if doing so "may ultimately exclude competitors."[156] The Court concluded that any advantage that the conduct gave to Google Maps, which was not given to Google's mapping rivals, was justified because (a) users benefitted from the incorporation of mapping results generally, and (b) Google Maps had certain features that rival mapping services did not have.[157] Thus, the incorporation of Google Maps into Google's search results pages constituted a form of "competition on the merits."[158] Consumers would clearly be worse off if, in these circumstances, Google were forced to incorporate less efficient mapping services into its search results instead of or as well as its own, or unbundle mapping services from its search results entirely (although those rivals would of course benefit enormously).

Of course, it is generally plausible that firms can be motivated by a desire to stifle competition in adjacent markets and extend market power in order to increase profits. The assumption of antitrust jurisprudence prior to the Chicago School's influence was that anti-competitive leveraging was the only, or at least the most recurrent,

153. United States v. Microsoft Corp., 253 F.3d 34, 93 (D.C. Cir. 2001) (finding, in the context of Microsoft tying Internet Explorer to Windows, that "the bundling of a browser with [operating systems] enables independent software developers to count on the presence of the browser's APIs, if any, on consumers' machines and thus to omit them from its own package.").

154. *See, e.g.*, Bowman, *supra* note 6, at 27–29; J. Gregory Sidak, *Do Free Mobile Apps Harm Consumers?*, 52 San Diego L. Rev. 619, 629 (2015).

155. Streetmap.eu Ltd. v. Google Inc. [2016] EWHC 253 (Ch) (Roth J.) (Eng.).

156. *Id.* at ¶ 62.

157. *Id*. at ¶¶ 117–18.

158. *Id*. at ¶ 116.

explanation for tying, bundling, and other forms of leveraging conduct. Post-Chicago economic models verified that leveraging can be anti-competitive, but that it can also be pro-competitive. Even though anti-competitive concerns can theoretically arise, it remains the case that, empirically, leverage is predominantly motivated by efficiency justifications.[159] This relative frequency in favor of pro-competitive adjacent market entry and leveraging entails that *per se* rules against such conduct were unjustified, and that evidence-based enforcement should prevail going forward.

E. Distinguishing Anti-Competitive from Pro-Competitive Leveraging

Under a consumer welfare standard, dominant firms can grant advantages to their own adjacent products, even if this hampers rival firms' ability to compete in the adjacent market, when the efficiencies generated benefit consumers. This is tolerated—indeed, lauded—even if less efficient rivals in adjacent markets are excluded. As the Second Circuit has held, "an integrated business [does not] offend the Sherman Act whenever one of its departments benefits from association with a division possessing a monopoly in its own market."[160] The benefits that accrue to integrated firms, namely "more efficient production, greater ability to develop complementary products, reduced transaction costs, and so forth . . . cannot by themselves be considered uses of monopoly power."[161] Unlike in the pre-Chicago world, where there was a general belief that vertical integration and leveraging were without redeeming features, and thus a *per se* ban on such conduct was (ostensibly) justified, a consumer welfare standard recognizes that leveraging can have both beneficial and harmful effects.[162]

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159. David S. Evans & Michael A. Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 YALE J. ON REG. 37, 40 (2005). ("[C]asual empiricism suggests that efficiencies must be the major explanation for tying: tying is common in competitive markets and therefore cannot result mainly from foreclosure or from price discrimination."); Stan J. Liebowitz & Stephen E. Margolis, *Bundles of Joy: The Ubiquity and Efficiency of Bundles in New Technology Markets*, 5 J. COMPETITION L. ECON. 1, 3 (2008) ("[B]undling not only occurs under some competitive conditions, but it is pervasive in the economy and is the dominant form of sales, for reasons that have to do with efficiencies of a simple and obvious nature: most goods are bundles.").

160. Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 275 (2d Cir. 1979).

161. *Id.*; *see also* AD/SAT v. Associated Press, 181 F.3d 216, 231 (2d Cir. 1999) ("[I]t is not unlawful for an existing firm, entering a new product market, to promote its product by touting the benefits afforded by that product's association with the firm. Nor it is unlawful for employees of one division of a firm to promote products produced by another division.").

162. Judge Easterbrook goes one step further, holding that "the search for the rare situation in which that [adjacent] monopoly just might allow the firm to gain a profit by injuring consumers is not worth the candle." He continued, "The search itself (and the risk of error in the judicial process) has much more chance of con-

Moreover, because the beneficial effects of vertical integration and leveraging are ubiquitous compared to their anti-competitive effects, a consumer welfare standard should pay due regard and deference to defendants' efficiency justifications.[163]

Take, for instance, *United States v. Microsoft*.[164] Though only a circuit court judgment, it is reflective of the consumer welfare standard as applied to leveraging conduct and clearly forms the basis of the DOJ's enforcement priorities in this sphere.[165] Microsoft held a monopoly position in the market for desktop OSs. Its monopoly power came under threat from Netscape's Navigator web-browser, which allowed developers to create applications without incurring the cost of porting them to other OSs. Microsoft believed that developers would flock to write for Navigator instead of Windows, which would undermine Microsoft's dominant position in the OS market. In response, Microsoft bundled its own web-browser, Internet Explorer (IE), with Windows and took various strategic steps to deter users from downloading and original equipment manufacturers from pre-loading Netscape on Windows computers. Microsoft leveraged its monopoly position, thereby "sabotage[ing] a nascent technology that might compete with [Windows] but for its foreclosure from the market."[166]

The D.C. Circuit applied a rule of reason to Microsoft's conduct, meaning that Microsoft could offer "a nonpretextual claim that its conduct is indeed a form of competition on the merits because it involves, for example, greater efficiency or enhanced consumer appeal."[167] Though purporting to engage in balancing under the rule of reason to assess the legality of Microsoft's conduct, the D.C. Circuit in fact did not do any balancing.[168] The D.C. Circuit condemned Microsoft for

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demning a beneficial practice than of catching a detrimental one." Schor v. Abbott Labs., 457 F.3d 608, 613 (7th Cir. 2006).

163. Hylton & Salinger, *supra* note 141.
164. *See* United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).
165. Kadhim Shubber, *US Antitrust Chief Signals Comfort with Tech Deals*, FIN. TIMES (July 12, 2018), https://www.ft.com/content/2e6e1f90-8558-11e8-a29d-73e3d454535d [https://perma.unl.edu/E83K-TJAB].
166. United States v. Microsoft Corp., 87 F. Supp. 2d 30, 51 n.6 (D.D.C. 2000) (quoting III PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1746.1d at 495 (Supp.1999)).
167. *Microsoft*, 253 F.3d at 59.
168. Herbert Hovenkamp, *Antitrust Balancing*, 12 N.Y.U. J.L. & BUS. 369, 371–72 (2016) (noting that the D.C. Circuit in *Microsoft* "decided that case with almost no balancing . . . ."); Mark S. Popofsky, *Defining Exclusionary Conduct: Section 2, the Rule of Reason, and the Unifying Principle Underlying Antitrust Rules*, 73 ANTITRUST L.J. 435, 445 (2006) ("[W]hen analyzing Microsoft's unilateral 'product design' conduct . . . the court, while using the language of comparing effects, in fact *avoided* that inquiry."); A. Douglas Melamed, *Exclusionary Conduct Under the Antitrust Laws: Balancing, Sacrifice, and Refusals to Deal*, 20 BERKELEY TECH. L.J. 1247, 1257 (2005) (noting that the D.C. Circuit "did not actually engage in market-wide balancing. To the contrary, when it came to deciding the case on the

those exclusionary acts for which it could offer no justification and absolved Microsoft for those acts for which it did offer a justification. Such a bifurcated analysis preserves the distinction between pro- and anti-competitive leverage, achieving an optimal outcome from the perspective of consumers.

The FTC's closure of its investigation into Google's search practices is also illustrative of this standard. The FTC found that Google promoted its own adjacent services (such as local search and comparison shopping) by incorporating them into its search results pages.[169] However, consumers benefitted from this conduct because it enabled Google to "quickly answer, and better satisfy, its users' search queries by providing directly relevant information."[170] The FTC recognized the potential harm that could be caused by "second-guess[ing] a firm's product design decisions where plausible procompetitive justifications have been offered, and where those justifications are supported by ample evidence."[171]

Where platform owners are unable to introduce evidence of plausible pro-competitive justifications, there is a strong case for intervention once a plaintiff has discharged is burden of showing anti-competitive effects. This standard fits with Supreme Court doctrine, which holds that, "[i]f a firm has been 'attempting to exclude rivals on some basis other than efficiency,' it is fair to characterize its behavior as predatory".[172] On the other hand, where a platform owner can introduce evidence of an efficiency that plausibly benefits consumers, it will be absolved.

Following the insights of the Chicago School and the consumer welfare framework, antitrust law distinguishes between pro- and anti-competitive leveraging, condemning the latter but not the former. Due to the relative prevalence of the former, scholars advocate a deferen-

facts before it, the court did what antitrust courts usually do: it deemed anticompetitive only those aspects of the defendant's conduct that seemed to make no business sense except as a means of excluding rivals.").

169. FTC Google Statement, *supra* note 39, at 2. Despite its apparent similarity to the EC's *Shopping* case, the FTC investigation's theory of harm may be more comparable to defensive leveraging, as in *Microsoft*. *See* FTC, Memorandum on Google Inc., File No. 111-0163, at 18–30 (Aug. 8, 2012) (see memo as it appeared on the *Wall Street Journal's* website, *The FTC Report on Google's Business Practices*, WALL ST. J. (Mar. 24, 2015), http://graphics.wsj.com/google-ftc-report/ [https://perma.unl.edu/AD5H-E4PH]. The leaked memo shows only every other page.) (alleging that Google "preferenc[ed] its own vertical content over that of rivals, while simultaneously demoting rival vertical websites, in order to maintain, preserve, or enhance its monopoly power in the markets for search and search advertising.").

170. FTC Google Statement, *supra* note 39, at 2.

171. *Id*.

172. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985) (quoting BORK, *supra* note 100, at 138).

tial standard towards firms' product design decisions.[173] Such an approach preserves the ability of dominant firms to legitimately compete and provide consumers with the integrated products that they demand, while condemning anti-competitive conduct that stifles adjacent market competition with no consumer benefits. The next section examines regulatory proposals that would, to varying degrees, dissolve the distinction between pro- and anti-competitive leveraging.

IV. ABROGATING CONSUMER WELFARE IN FAVOR OF SMALL BUSINESS WELFARE

It has long been the case that "the primary purpose of the antitrust laws is to protect interbrand competition."[174] However, in certain circumstances, it can be preferable from the perspective of societal welfare to shift the focus from inter-to intra-brand competition. Often, this is achieved through recourse to regulation or legislative initiatives. Take, for example, must-carry provisions imposed on cable operations or since-repealed net neutrality regulation. In circumstances such as these, society willingly foregoes the benefits of competition in the inter-brand market because it has concluded, for one reason or another, that preserving competition in the intra-brand market is more important. This can mean tolerating counterfactually higher prices or reduced quality as a by-product of protecting interests deemed to be more important, such as maintaining a pluralistic downstream market.[175] It inevitably also distorts the incentive to innovate the inter-brand market.[176] As the Supreme Court noted in *Trinko*:

> Firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.[177]

173. *See, e.g.*, Dennis Carlton & Michael Waldman, *How Economics Can Improve Antitrust Doctrine Towards Tie-In Sales: Comment on Jean Tirole's "The Analysis of Tying Cases: A Primer"*, 1 COMPETITION POL'Y INT'L 27, 38 (arguing that "great weight should be given to any plausible efficiency from [tying arrangements]" and that "efficiencies achieved through physical integration . . . should receive greater weight than efficiencies achieved through contract.").
174. State Oil Co. v. Khan, 522 U.S. 3, 15 (1997).
175. Turner Broad. Sys., Inc. v. FCC, 520 U.S. 180, 189 (1997) (noting that the intention of Congress when enacting must-carry obligations for cable companies was *inter alia* to "promot[e] the widespread dissemination of information from a multiplicity of sources.").
176. Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004); Caves & Singer, *supra* note 12, at 7 ("[W]ith more enforcement, *platform* innovation could decrease due to the reduced incentive for existing or would-be platforms to invest; for example, a regime that shared the majority of the rents of incumbent platforms with edge providers or rival platforms could upset Schumpeterian competition.").
177. *Trinko*, 540 U.S. at 407.

Nonetheless, there is a growing belief that such an inversion of the goals of competition policy is exactly what is needed in digital platform markets. Some commentators speak of a "kill zone" to describe those markets that small start-ups dare not enter through fear of being displaced by an existing platform owner.[178] As one columnist writes, "[i]f founders believe that big companies will copy their innovations cheaply and compete them out of the market, they'll never spend the time and effort to create those innovations in the first place."[179] The cost of false negatives (i.e., those instances where anti-competitive conduct is erroneously found to be lawful) is said to be high because the market is less likely to self-correct, as Chicagoans presume. This is especially true where the adjacent market is characterized by network effects: a platform owner that illegitimately nudges consumers towards its own adjacent protect could tip the adjacent market in favor of its product to the exclusion of all other firms.[180] This has led some scholars to conclude that regulatory intervention is necessary to block *all* leveraging behavior, whether pro-competitive or anti-competitive.

Given that antitrust law has landed on a position that consumer welfare trumps small-business welfare, serious deliberation would be required before enacting a standard that sacrifices consumer benefits flowing from adjacent market entry and leverage in order to prop up less efficient businesses that depend on platforms for distribution. This section therefore examines the empirical criteria that one would expect to be verified before re-shifting the focus of antitrust law or competition policy from inter-platform competition to intra-platform competition. First of all, it examines various proposals put forward to regulate platform owners' activity in adjacent markets, showing that each one constitutes an abrogation of consumer welfare in favor of the welfare of similar, less efficient businesses.

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178. Noah Smith, *Big Tech Sets Up a 'Kill Zone' for Industry Upstarts*, BLOOMBERG (Nov. 7, 2018, 7:00 AM), https://www.bloomberg.com/amp/opinion/articles/2018-11-07/big-tech-sets-up-a-kill-zone-for-industry-upstarts?twitterimpression=true [https://perma.unl.edu/5TXA-BAWM]; *cf.* Will Rinehart, *Is There a Kill Zone in Tech?*, TECH. LIBERATION (Nov. 18, 2018), https://techliberation.com/2018/11/07/is-there-a-kill-zone-in-tech/ [https://perma.unl.edu/ZK3D-GR67].

179. *Id*.

180. When EC found that Microsoft had illegally leveraged from the desktop OS market to the market for streaming media players, it held that "the abuse ha[d] already contributed to Microsoft achieving a leading position in [the adjacent] market," and the evidence suggested that "the market may already be tipping in favour of WMP." *See* Case COMP/C-3/37.792, Microsoft v. Comm'n, 2004, ¶ 1071. The media player market was characterised by network effects. *Id.* at ¶ 878.

A. Proposals to Regulate Adjacent Market Competition

1. Structural Separation

Neo-Brandeisians propose to implement "[s]tructural remedies and prophylactic bans [to] limit the ability of dominant platforms to enter certain distinct lines of business."[181] Senator Warren has echoed this policy in her bid for the U.S. presidency, calling for "large tech platforms to be designated as 'Platform Utilities' and broken apart from any participant on that platform."[182] So too have numerous op-eds.[183] In 2018, for example, *The Economist* floated the idea of "block[ing] big online firms from offering certain services on top of their platforms because they might favor them over rival offerings."[184]

Under this proposal, Amazon would be unable to act both as an online marketplace and a seller on its own marketplace, Google would be unable to act as both a search engine and a mapping provider, and Apple and Google would be unable to act as both producers of mobile OSs and apps that run on those OSs. Khan posits that this is the primary method of "prevent[ing] leveraging and eliminat[ing] a core conflict of interest currently embedded in the business model of dominant platforms."[185]

A rule that prohibits adjacent market entry by dominant platform firms will certainly catch all instances of harmful leveraging, but it will inevitably also condemn *all* instances of leveraging that are in fact beneficial to consumers. Moreover, structural separation would also condemn efficiencies arising from adjacent market entry that *do not* depend on leveraging behavior. As demonstrated in section II.D, there are many efficiencies that can arise from adjacent market entry and leveraging that consumers benefit from. Moreover, empirical analysis demonstrates that these consumer benefits are far more fre-

181. Lina M. Khan, *Sources of Tech Platform Power*, 2 GEO. L. TECH. REV. 325, 332 (2018).
182. Warren, *supra* note 27.
183. Nilay Patel, *It's Time to Break up Facebook*, THE VERGE (Sept. 4, 2018), https://www.theverge.com/2018/9/4/17816572/tim-wu-facebook-regulation-interview-curse-of-bigness-antitrust [https://perma.unl.edu/LJK8-3TPN]; *Break up Google*, THE BOSTON GLOBE (June 14, 2018), https://apps.bostonglobe.com/opinion/graphics/2018/06/break-google/ [https://perma.unl.edu/XQ82-N6ZH]; Douglas Rushkoff, *It's Time to Break up Amazon,* FAST COMPANY (June 19, 2017), https://www.fastcompany.com/40432885/its-time-to-break-up-amazon [https://perma.unl.edu/W359-WJZ2]; Scott Galloway, *Silicon Valley's Tax-Avoiding, Job-Killing Soul-Sucking Machine*, ESQUIRE (Feb. 8, 2018), https://esquire.com/news-politics/a15895746/bust-big-tech-silicon-valley/ [https://perma.unl.edu/B8AF-N4VY].
184. *How Regulators Can Prevent Excessive Concentration Online*, THE ECONOMIST (June 28, 2018), https://www.economist.com/spectial-report/2018/06/30/how-regulators-can-prevent-excessive-concentration-online [https://perma.unl.edu/WK5K-Q274].
185. Khan, *supra* note 181, at 333.

quent than anti-competitive harms.[186] Bruce Owen notes that "prophylactic regulation is not necessary, and may well reduce welfare by deterring efficient investments," in circumstances where "[e]mpirical evidence that vertical integration or vertical restraints are harmful is weak, compared to evidence that vertical integration is beneficial."[187]

This proposal therefore abrogates the consumer welfare standard that prevails under existing antitrust doctrine. However, Neo-Brandeisians are apparently not (primarily, at least) driven by the interests of consumers. They instead seek a return to the position that one goal of antitrust law is to protect "viable, small, locally owned businesses," even if this results in "occasional higher costs and prices."[188] In this era, antitrust law and policy "perpetuat[ed] and preserv[ed], for its own sake and in spite of possible cost, an organization of industry in small units which can effectively compete with each other."[189] This atomistic vision of competition is associated with Justice Louis Brandeis, who famously championed the idea that "bigness" is a curse.[190]

2. *Non-Discrimination Principles*

Some scholars believe that the existing consumer-welfare standard fails to adequately protect the competitive process in digital markets and therefore seek a prohibition on leveraging. This principle is commonly referred to as "non-discrimination" or "platform neutrality," but both refer to the basic concept that digital platform owners, though able to enter and compete in adjacent markets, would be prohibited from granting advantages to their adjacent products by leveraging the popularity of the platforms themselves.[191] Hal Singer and Kevin Caves propose a tribunal that rivals in adjacent markets could turn to where dominant platform firms promote their own adjacent products within the platform infrastructure.[192] The objective is to prevent the situation arising where a platform owner succeeds in an adjacent market solely by "privileging" or "self-preferencing" its own product over

186. *See supra* notes 147–149.
187. Owen, *supra* note 9, at 381.
188. Brown Shoe Co., Inc. v. United States, 370 U.S. 294, 344 (1962).
189. United States v. Aluminum Co., 148 F.2d 416, 429 (2d Cir. 1945).
190. *See* Barak Orbach & Grace E. Campbell Rebling, *The Antitrust Curse of Bigness*, 85 S. CAL. L. REV. 605 (2012). Justice Brandeis is cited as introducing this goal of "small-business welfare." *See* BORK, *supra* note 100, at 17.
191. Caves & Singer, *supra* note 12; Frank Pasquale, Testimony Before the Task Force on Competition Policy and Antitrust Laws of the H. Comm. on the Judiciary: Internet Nondiscrimination Principles for Competition Policy Online (2008); Frank A. Pasquale, *Dominant Search Engines: An Essential Cultural & Political Facility*, *in* THE NEXT DIGITAL DECADE: ESSAYS ON THE FUTURE OF THE INTERNET, 399 (Berin Szoka & Adam Marcus eds., 2011) (arguing that dominant search engines should be regulated as essential public facilities).
192. *See* Caves & Singer, *supra* note 12.

and above those of its rivals, thus frustrating the natural process of competition in the adjacent market.[193] Singer and Caves would model their "Net Tribunal" on § 616 of the Communications Act, which bars multichannel video programming distributors (MVPDs) from discriminating against unaffiliated programming networks when making decisions about content distribution, where the effect is to "unreasonably restrain the ability of an unaffiliated video programming vendor to compete fairly."[194]

Though framed as a regulatory regime operating in parallel to antitrust law, the tribunal would have the effect of supplanting antitrust in favor of a standard that blocks all leveraging behavior, whether pro-competitive or anti-competitive. For example, Apple and Google could still produce both apps and software platforms, but they would be unable to bundle them together, even if doing so improves the user experience. Amazon would still be able to act as both a marketplace and a seller of products, but Amazon would be unable to give preferential treatment to its own products, even if they are cheaper or better quality or if there is some other reason why consumers benefit from seeing Amazon's home-brand products first. Singer applies the standard to Google Search thusly:

> The standard would prevent Google from limiting its search results for local doctors or local restaurants to Google-affiliated web properties; instead, Google would be required to run its PageRank algorithm across the entirety of the public web for local searches. Under a non-discrimination standard, a vertically integrated Google could discriminate in its organic search results in every dimension save one—whether the results are affiliated with Google.[195]

This proposal disregards the distinction between pro-competitive and anti-competitive leveraging, which allows discrimination based on affiliation where the resulting product benefits consumers. Think back to the English case of *Streetmap*, where Google privileged its mapping services on its search results pages over and above those of its rivals. Under non-discrimination regulation, Streetmap could have obtained an injunction that would have forced Google to display third-party mapping services at the top of search result pages (despite their deficiencies) or none at all. This would have harmed consumers in order to prop up less efficient firms, and it is not clear how such intervention would preserve the incentive to innovate when Google had already produced the best mapping service through competition on the

193. *See* EC Digital Competition Report, *supra* note 11, at 66 (defining self-preferencing as "giving preferential treatment to one's own products or services, or one from the same ecosystem, when they are in competition with products and services provided by other entities.").

194. 47 U.S.C. § 536(a)(3) (2012).

195. Hal Singer, *Inside Tech's "Kill Zone": How to Deal With the Threat to Edge Innovation Posed by Multi-Sided Platforms*, PRO-MARKET (Nov. 21, 2018), https://promarket.org/inside-tech-kill-zone/ [https://perma.unl.edu/346W-PTQU].

merits. Platform owners can, and do, benefit consumers through the integration of new functionality into the platform code.[196] A standard that prohibits this behavior therefore abrogates antitrust law's focus on consumer welfare.

3. *Burden Reallocation*

Finally, the EC Digital Competition Report suggests recalibrating the legal analysis of leveraging conduct by "err[ing] on the side of disallowing potentially anti-competitive conducts, and impos[ing] on the incumbent the burden of proof for showing the pro-competitiveness of its conduct."[197] In cases of leveraging into adjacent markets, the report proposes "a presumption in favour of a duty to ensure interoperability."[198] Once a plaintiff establishes that leveraging conduct exists, the defendant would then bear the burden of showing that this conduct *did not* have long-run anti-competitive effects *or* that the conduct had an overriding efficiency rationale.[199] Proving that conduct does not have a long-term impact on competition, may be nigh on impossible, as it involves proving a negative.[200]

This proposal can be seen as bringing non-discrimination in by the back door and would return antitrust law to form-based rules that neglect the actual effects of conduct on competition or consumers. In the EU, for example, the law of tying remains form-based, in the sense that authorities do not have to examine the effects of the conduct on competition or consumers.[201] Take the case of *Windows Media Player*, where the EC found that Microsoft had illegally tied its media-player software to its Windows operating system.[202] On appeal, it was sufficient for the European General Court that (a) Microsoft had a dominant position in the OS market, (b) Windows and Windows Media Player were separate products, and (c) Microsoft did not let users ob-

196. *See supra* subsection III.D.2.

197. EC Digital Competition Report, *supra* note 11, at 4.

198. *Id. See also* STIGLER, *supra* note 11, at 77 ("Burdens of proof might be switched by adopting rules that will presume anticompetitive harm on the basis of preliminary showings by antitrust plaintiffs and shift a burden of exculpation to the defendant or by ensuring that plaintiffs are not required to prove matters to which the defendants have greater knowledge and better access to relevant information.").

199. EC Digital Competition Report, *supra* note 11, at 66–67.

200. Maurits Dolmans & Tobias Pesch, *Should We Disrupt Antitrust Law?*, 5 COMPETITION L. & POL'Y DEBATE 71, 79 (2019).

201. Case T-201/04, Microsoft Corp. v. Comm'n, 2007 E.C.R. II-03601, ¶ 1058 (noting that the EC had conducted an effects analysis, but concluding that "the Commission's findings in the first stage of its reasoning [i.e., that the tying arrangement existed] are in themselves sufficient to establish that [the foreclosure element is satisfied]").

202. Case COMP/C-3/37.792, Microsoft Corp., Comm'n Decision (Mar. 24, 2004).

tain Windows without Windows Media Player.[203] The EC did *not* have to demonstrate the actual effects of the conduct on competition.[204] Under the EC Digital Competition Report's proposal, an authority would similarly be able to point to a form of conduct and enjoin the firm from performing it, absent any evidence that the conduct actually harms consumers. In other words, all leveraging would be presumptively anti-competitive. This is odd in light of the fact that the Report concedes that self-preferencing, a form of leveraging, should be subject to an effects-based analysis.[205] Nonetheless, the EU Digital Competition Report argues that leveraging "should be forbidden in the absence of clearly documented consumer welfare gains," even in circumstances where "consumer harm cannot be precisely measured."[206]

As to a firm's ability to show a pro-competitive rationale, it is *already* difficult in the EU, where this proposal has been promulgated, to justify exclusionary conduct.[207] As Richard Whish and David Bailey recognize in their authoritative textbook, they "are not aware of any case in which an efficiency defence has succeeded under Article 102."[208] This is despite the fact that European authorities and courts too have recognized the legitimate act of a dominant firm excluding competitors by simply doing a better job.[209] Given the tough burden that dominant firms already carry of showing pro-competitive justifications in the EU, making the standard any more strict will collapse an effects-based model for leveraging by platform owners into blanket non-discrimination, with the same implications for consumer welfare. The EU Digital Competition Report itself admits as much, citing for its proposition a report from the French telecoms regulator which advocates "a principle of 'net neutrality' for smartphones, tablets and voice assistants."[210]

203. Case T-201/04, Microsoft Corp. v. Comm'n, 2007 E.C.R. II-03601, ¶¶ 854–59 (accepting the EC's arguments regarding the constituent elements of a tying claim); Christian Ahlborn & David S. Evans, *The Microsoft Judgment and its Implications for Competition Policy Towards Dominant Firms in Europe*, 75 ANTITRUST L.J. 887, 907 (2009) ("[I]n order to satisfy the 'foreclosure of competition' element of the tying abuse, the CFI found that it was sufficient to demonstrate the existence of an advantage from tying over rivals which do not have opportunity to bundle. The impact of such an advantage on competition and consumer welfare will then be presumed and need not be established.").
204. Case T-201/04, Microsoft Corp. v. Comm'n, 2007 E.C.R. II-03601, ¶ 1058.
205. EC Digital Competition Report, *supra* note 11 at 66.
206. *Id*. at 42.
207. Ahlborn & Evans, *supra* note 203, at 905 (noting that the "defense of objective justification has played no role in the outcome of [EU tying] cases.").
208. RICHARD WHISH & DAVID BAILEY, COMPETITION LAW 218 (9th ed. 2018).
209. *See, e.g.*, Case C-413/14 P, Intel v. Comm'n, 2007 E.C.R. 632, ¶¶ 133–34.
210. *Id.* at 67 n.91 (citing ARCEP, Smartphones, Tablettes, Assistants Vocaux . . . les Terminaux, Maillon Faible de l'Ouverture d'Internet, Rapport sur leur Limites et sur les Actions a' Envisager 2018, available at https://www.arcep.fr/uploads/

B. Empirical Criteria for Abrogating Consumer Welfare

Each of the above proposals would, to varying degrees, dissolve the distinction between pro- and anti-competitive leveraging and, in the case of structural separation, pro- and anti-competitive adjacent market entry. The question then becomes whether we *should* ignore the incentive to innovate in inter-platform markets and turn our societal interests to intra-platform competition. This section examines the empirical criteria that we should expect to see satisfied before we take this drastic step.

1. Strategic Bottleneck Power

In past instances of regulation or structural separation of vertically integrated firms, there has been a concern that the entities had strategic "bottleneck" power over the distribution of some downstream product or service. This is true of the must-carry provisions imposed on cable operators,[211] the non-discrimination principle enshrined in § 616,[212] and since-repealed net neutrality regulation.[213] The same is logically true of structural separation, since it is more intrusive. When the District Court approved the consent decree structurally separating AT&T's long-distance arm from its local operating companies, it was motivated by the fact that "the principal means by which AT&T has maintained monopoly power in telecommunications has been its control of the Operating Companies with their strategic bottleneck position."[214] Khan, in her proposal to structurally separate platforms from adjacent businesses, notes that past enforcement of separations

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tx_gspublication/rapport-terminaux-fev2018.pdf [https://perma.unl.edu/U7C4-FNHT] [last visited Aug. 29, 2019]).

211. *See* Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622 (1994); Turner Broad. Sys., Inc. v. FCC, 520 U.S. 180, 197 (1997) (for example, Justice Kennedy wrote that "cable operators had considerable and growing market power over local video programming markets" and that "only one percent of communities are served by more than one cable system").

212. Comcast Cable Commc'ns, LLC v. FCC (noting that Congress enacted the Cable Act to "curb abuses of cable operators' bottleneck monopoly power and to promote competition in the cable television industry.").

213. Verizon v. FCC, 740 F.3d 623, 646 (D.C. Cir. 2014) (noting that the FCC had "convincingly detailed how broadband providers' position in the market gives them the economic power to restrict edge-provider traffic and charge for the services they furnish edge providers. Because all end users generally access the Internet through a single broadband provider, that provider functions as a 'terminating monopolist' with power to act as a 'gatekeeper' with respect to edge providers that might seek to reach its end-user subscribers."). That said, net neutrality was repealed in 2018 in part because it was found that broadband providers faced competitive pressure. *See* Restoring Internet Freedom Order, FCC Rcd. 17-166 (2018), at ¶¶ 123–38.

214. United States v. AT&T Co., 552 F. Supp. 131, 171 (D.D.C. 1982) (emphasis added).

regimes has involved "particular markets and services where a bottleneck facility served as infrastructure or a critical intermediary."[215]

Two questions arise, one theoretical and one empirical. The first is what it means to possess strategic bottleneck power. A firm with strategic bottleneck power sits between suppliers and consumers and, through the control of some vital input or method of distribution, hegemonizes access between the two. The early case of *U.S. v. Terminal R.R. Ass'n of St. Louis* exemplifies what it means to possess such power.[216] Often invoked as the maiden case of the "essential facilities" doctrine,[217] the Supreme Court in *Terminal Railroad* mandated a group of firms that controlled the only railroad bridge across the Mississippi River into and out of St. Louis to grant rival railroads access to the bridge on "just and reasonable" terms.[218] The bottleneck power inherent in ownership of the bridge derived from the fact that, topographically, there was no alternative route for railroads into or out of St. Louis, such that "every train that hoped to pass through St. Louis to and from different parts of the country had to cross the Mississippi River."[219] Moreover, a bridge is a classic example of a "natural monopoly," in the sense that economies of scale are so large relative to consumer demand that the market can efficiently sustain only one firm.[220] In *Terminal Railroad*, constructing another bridge, "even if feasible, would have been economically inefficient and socially wasteful."[221] It is easy to conclude, on these facts, that the consortium of firms that denied access to the bridge to rival railroads possessed strategic bottleneck power. In cases of natural monopoly, there is a stronger case for switching the focus from the monopolist's continued incentive to innovate to the innovation incentives in the downstream

215. Khan, *supra* note 13, at 1048.

216. United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).

217. *See, e.g.*, Marina L. Lao, *Networks, Access, and Essential Facilities: From* Terminal Railroad *to* Microsoft, 62 S.M.U. L. REV. 557 (2009) ("Generally seen as originating in the Supreme Court's 1912 *Terminal Railroad* decision, the essential facilities doctrine holds that a dominant firm's refusal to grant access to a facility it controls, which is necessary for competition and infeasible to replicate, may give rise to antitrust liability."); Sandeep Vaheesan, *Reviving an Epithet: A New Way Forward for the Essential Facilities Doctrine*, 2010 UTAH L. REV. 911, 918 (2010) ("The [essential facilities] doctrine's origin is typically traced to the 1912 Supreme Court case *United States v. Terminal Railroad Ass'n.*").

218. *Terminal R.R.*, 224 U.S. at 411.

219. Lao, *supra* note 21717, at 568.

220. Glen O. Robinson, *On Refusing to Deal with Rivals*, 87 CORNELL L. REV. 1177, 1207 (2002) ("In nearly every case [of essential facilities], the facilities are capital assets that cannot be economically duplicated given the size of the market—a communications network, a central terminal facility, stadium, or energy transmission facilities.").

221. Lao, *supra* note 21717, at 568.

market.[222] This is because "[a] natural monopoly, while not procompetitive as such, is economically unavoidable."[223]

However, it is insufficient to postulate that digital platform owners possess strategic bottleneck power without empirically verifying whether they do so in practice. The following discussion demonstrates that this conclusion is dubious.

Take the concerns with Google Search outlined in subsection I.B.1 above. In the EC's decision in *Google Shopping*, it found that referrals from Google Search accounted for a large proportion of traffic to rival comparison shopping websites and that traffic could not be effectively replaced by other sources.[224] However, casual empiricism reveals that firms operating in adjacent markets have many more routes to consumers that flout discovery through a search engine.[225] As John Temple Lang observes, they can access consumers through "direct navigation, specialized search services, social networks such as Facebook and Pinterest, partnerships with PC and mobile device markets, agreements with other publishers to refer traffic to each other, and so on."[226] Geoffrey Manne argues that, to the extent that vertical search firms like comparison shopping owners invest specific assets to distribute through Google Search and ignore these other channels, this is a significant business risk that would be considered foolish by industry specialists.[227]

Also consider Apple's iOS and Google's Android. First, they compete against each other and thus neither firm, by definition, can possess the degree of strategic bottleneck power required to abandon their respective incentives to innovate.[228] Neither developers nor

222. Marina L. Lao, *Search, Essential Facilities, and the Antitrust Duty to Deal*, 11 NW. J. TECH. & INTELL. PROP. 275, 289 (2013) (making this point).

223. Daniel E. Troy, *Unclogging the Bottleneck: A New Essential Facility Doctrine*, 83 COLUM. L. REV. 441, 443 (1983).

224. *Google Shopping*, *supra* note 36, at ¶ 539.

225. Robert H. Bork & J. Gregory Sidak, *What Does the Chicago School Teach About Internet Search and the Antitrust Treatment of Google?*, 8 J. COMPETITION L. & ECON. 663, 669–72 (2012) (arguing that Google Search is not a "gateway" to the internet).

226. John Temple Lang, *Comparing Microsoft and Google: The Concept of Exclusionary Abuse*, 39 WORLD COMPETITION 5 (2017).

227. GEOFFREY A. MANNE, THE REAL REASON FOUNDEM FOUNDERED 6–8 (ICLE Antitrust & Consumer Protection Research Program, White Paper 2018-02) (quoting Ana Hoffman, *Where Does Website Traffic Come from: Search Engine and Referral Traffic*, TRAFFIC GENERATION CAFE (Mar. 12, 2018), https://trafficgenerationcafe.com/website-traffic-source-search-engine-referral/ [https://perma.unl.edu/5W8X-3NXG]).

228. Sundar Pichai, *Android has Created More Choice, Not Less*, THE KEYWORD (July 18, 2018), https://www.blog.google/around-the-globe/google-europe/android-has-created-more-choice-not-less/ [https://perma.unl.edu/Y285-U4L3] ("The [EC] decision ignores the fact that Android phones compete with iOS phones, something that 89 percent of respondents to the Commission's own market survey con-

users are locked in once they start developing for or using Android or iOS.[229] Moreover, app developers can circumvent Google and Apple's control over their respective app stores within those companies' platform ecosystems. For example, they can distribute their application to users through a web-browser. Spotify, for example, eludes Apple's subscription fee by directing users to subscribe to its premium service on its website. Apple claims that it takes a cut of Spotify's subscription revenue for only 680,000 of Spotify's 100 million users, as Spotify only converted users from free to premium through Apple's in-app purchase function from 2014 to 2016.[230] Similarly, Amazon circumvents Apple's cut of sales by preventing its customers from purchasing e-books through its iPhone or iPad apps, but allowing such purchases through Apple's web-browser (where Apple does not take a cut).[231]

As a final example, consider whether Amazon has strategic bottleneck power over online retail; in other words, whether merchants can, without incurring significant cost, access consumers without relying on Amazon's platform infrastructure. The German competition authority found that "*[m]any* sellers find Amazon's marketplace *very important* for their online sales, especially in terms of access to customers."[232] However, this is not the same as *all* sellers finding Amazon's platform *vital* as a means of accessing consumers. As of July 2018, Amazon accounted for just under half of all online sales in the U.S.[233] This may seem a staggering volume, but it in fact proves that distributors can—and do—bypass Amazon's platform to reach consumers, with great success. In 2017, the EC published the report of its e-commerce inquiry, which found that 90% of retailers sell through their own online shops, while 4% of retailers sell only through marketplaces like Amazon.[234] Indeed, some manufacturers have been known

firmed."). *But see* Android Decision, *supra* note 3, at ¶¶ 238–39 (finding that "non-licensable smart mobile OSs such as iOS and Blackberry OS do not belong to the same product market as licensable smart mobile OSs" because "OEMs cannot obtain a license to use iOS or Blackberry OS.").

229. Todd, *supra* note 151.
230. Markus Becker, *Apple Wehrt Sich Fegen Spotify-Vorwürfe*, SPIEGEL (June 24, 2019), https://www.spiegel.de/netzwelt/netzpolitik/spotify-beschwerde-bei-eu-kommission-apple-wehrt-sich-a-1273755.html [https://perma.unl.edu/9U37-9AKC].
231. Connery Carey, *How to Buy Amazon Kindle Books on the iPhone or iPad, iPhone Life* (Apr. 1, 2019), https://www.iphonelife.com/content/how-to-buy-kindle-books-iphone-or-ipad [https://perma.unl.edu/HK3D-CBNN].
232. Bundeskartellamt Amazon Press Release, *supra* note 61 (emphasis added).
233. Ingrid Lunden, *Amazon's Share of the US E-Commerce Market Is Now 49%, or 5% of All Retail Spend*, TECHCRUNCH (July 13, 2018), http://social.techcrunch.com/2018/07/13/amazons-share-of-the-us-e-commerce-market-is-now-49-or-5-of-all-retail-spend/ [https://perma.unl.edu/5HMA-K9JF] (last visited June 30, 2019).
234. Report from the Commission to the Council and European Parliament, Final Report on the E-commerce Sector Inquiry, at 134, COM (2017) 229 final (Oct. 5, 2017).

to contractually prohibit their distributors from selling their goods on Amazon, due *inter alia* to brand protection.[235] The importance of online marketplaces as a distribution channel also varies according to geography and the type of goods involved.[236] These findings show that Amazon is a far-cry from possessing strategic bottleneck power.

As this section has shown, it is unlikely that the tech companies that have been the subject of criticism possess strategic bottleneck power. Insofar as GAFA possess such power over *particular categories* of goods, this would not justify shifting the focus to intra-platform competition across *all* product categories. The market power element of traditional antitrust analyses serves to guard competition in these circumstances by carving a remedy around conduct that illegitimately hampers the ability of adjacent market competitors to compete.

Furthermore, even if GAFA did possess strategic bottleneck power, this would be a necessary but not sufficient criterion to justify disregarding pro-competitive leveraging and consumer welfare. Indeed, Microsoft was a good candidate for having strategic bottleneck power over the distribution of software applications at the time of *United States v. Microsoft*, given that applications had to be distributed through a PC OS and Microsoft had a greater than 95% of this market.[237] However, the D.C. Circuit recognized that other factors, namely the benefits to consumers of product integration, weighed against imposing unbundling or structural separation. The D.C. Circuit thus surgically dismantled Microsoft's anti-competitive behavior while allowing consumers the benefits from pro-competitive leveraging.[238]

2. *Widespread Harm in Adjacent Markets*

To ban platform owners from leveraging anti-competitively *and* pro-competitively, either through non-discrimination or structural separation, one would expect there to be cogent evidence of harm to competition across a multitude of adjacent goods that depend on the platforms for access to consumers. There should be such obvious long-term negative effects on consumer welfare that it is worth sacrificing the benefits of pro-competitive leveraging to prevent such harms from materializing. When Congress enacted the must-carry obligations, for example, it was in possession of "extensive anecdotal evidence about

235. *Id.* at 142–44 (finding that 18% of retailers are limited in some way in their ability to sell through online marketplaces, while 12% of retailers are banned from using online marketplaces completely).
236. *Id.* at 139–40.
237. United States v. Microsoft Corp., 253 F.3d 34, 54 (D.C. Cir. 2001) (accepting the District Court's finding that Microsoft had a share of over 95% in the market for Intel-compatible PC operating systems.).
238. *See supra* section III.E.

scores of adverse carriage decisions against broadcast stations."[239] Indeed, there was evidence that, by 1988, nearly a quarter of all broadcast stations had been denied carriage.[240]

Conversely, there is a dearth of evidence of such widespread harms in digital markets.[241] There is some empirical support for the proposition that adjacent market entry by platform owners dampens or skews innovation incentives of firms in adjacent markets. A study by Wen Wen and Feng Zhu found that Google's entry, or threat of entry, into app markets for the Android OS caused app developers in those markets to increase their prices and cease innovating in the affected app markets.[242] However, developers responded by shifting their efforts to other app markets and continuing to innovate by introducing new apps that were not similar to Google's. The authors thus concede that "platform owners could use direct entry to shape the innovation directions of complementors, reduce social inefficiency, and encourage more variety."[243] Platform entry, the authors found, may also be motivated by the desire to control quality on the platform.[244] For example, the authors pointed out that Google's entry into flashlight apps may have been motivated by users' privacy concerns in relation to existing third-party offerings.[245]

In another study, Feng Zhu and Qihong Liu found that Amazon's entry into third-party sellers' product markets "discourages affected third-party sellers from subsequently pursuing growth on the platform."[246] However, again, consumer welfare does not necessarily suffer from this finding. Indeed, the authors concluded that consumers "benefit from Amazon's efficient distribution systems and because of it are more likely to purchase the products."[247] Amazon's entry into adjacent market enables the provision of lower delivery costs.[248]

Moreover, other empirical studies show that third-party producers can benefit from platform entry into adjacent markets. One study by Foerderer *et al.* found that Google's entry into photography apps for the Android OS created additional consumer awareness of and de-

239. Turner Broad. Sys., Inc. v. FCC, 520 U.S. 180, 202 (1997).
240. *Id.* at 203.
241. Feng Zhu & Qihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRATEGIC MGMT. J. 2618, 2619 (2018) ("Empirical evidence on platform owners' entry strategies with respect to complementary markets is scant.").
242. Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market*, 40 STRATEGIC MGMT. J. 1336 (2019).
243. *Id.* at 19.
244. *Id.* at 19 n.27.
245. *Id.*
246. Zhu & Liu, *supra* note 2411.
247. *Id.* at 28.
248. *Id*.

mand for photography apps generally, which benefitted third-party producers.[249] Another paper by Zhuoxin Li and Ashish Agarwal studied the effect of Facebook's integration of Instagram on third-party producers.[250] The authors found that users benefitted from the closer integration of Instagram and Facebook, *and* that third-party producers benefitted from users' increased awareness of the app ecosystem.[251]

In a survey of empirical studies into platform owners' entry into adjacent markets, Zhu cautions that the existing literature focuses on short-run effects on users and third-party producers, but that long-run effects are ambiguous and still unmeasurable.[252] What is clear, however, is that the criterion that this Article has identified as a prerequisite to imposing blanket regulation to control the behavior of platform owners—widespread evidence of harm in adjacent markets—has not been satisfied. Instead, intervention should remain targeted and evidence-based. Where a complainant or authority can adduce evidence that a platform is leveraging into an adjacent market and raising rivals' costs of doing business, and where the platform owner cannot show a pro-competitive justification for the behavior, then antitrust law will intervene to enjoin the behavior. For this, no regulatory intervention is necessary and consumer welfare is preserved.

3. *Static Product Boundaries*

In prior cases of access regulation, the input that adjacent market rivals have depended on for access to consumers has been clearly distinguishable from the rivals' products. However, digital platforms are not railroads on which rolling stock sits and trundles along.[253] Platform owners constantly introduce new features and functionalities to their platforms to the benefit of both users and third-party distributors and integrate those features and functionalities with the platform itself. Antitrust literature commonly refers to "platforms" and "applications" as if these are perceptibly different products, but the reality is much different: both platforms and their complementary applications are composed of individual components. Any attempt to freeze the definitional boundary of a platform would negate platform owners' incen-

249. Jens Foerderer et al., *Does Platform Owner's Entry Crowd Out Innovation? Evidence from Google Photos*, 29 INF. SYST. RES. 444 (2018).
250. Zhuoxin Li & Ashish Agarwal, *Platform Integration and Demand Spillovers in Complementary Markets: Evidence from Facebook's Integration of Instagram*, 63 MGMT. SCI. 3438 (2017).
251. *Id.*
252. Feng Zhu, *Friends or Foes? Examining Platform Owners' Entry into Complementors' Spaces*, 28 J. ECON. & MGMT. 23 (2018).
253. *See* EC Digital Competition Report, *supra* note 11, at 67 ("When compared to the traditional infrastructures (e.g., rail, energy networks), platforms differ as aspects of infrastructure provision and service provision may be mixed.").

tive to build upon and improve their platforms, to the detriment of consumers. Consider the following components that Apple produces in-house: voice assistant (Siri), alarm, camera, and payment system (Apple Pay). These components are distributed with Apple's iOS platform and in essence form part of the OS itself. If Apple were prevented from vertically integrating, would it be allowed to be active in these adjacent markets? What would iOS look like? Could it even have a voice-call function? Alternatively, under non-discrimination regulation, what would a new iOS phone look like? Would it just be a blank screen where the user is then forced to choose between various alternatives? The problem with proposing to separate platforms from adjacent products (structurally or behaviorally) is that *any* platform component can theoretically be modularized and opened to competition by third parties.[254] When one breaks a platform down into its individual components and prevents adjacent market entry or leveraging, it is not clear what remains of the platform itself. Because integration of complementary components is an essential part of inter-platform competition, imposing the proposed regulation would destroy the very ecosystems that the competitors that critics seek to protect depend on.

This point was central to the D.C. Circuit's analysis of the tying claim in *United States v Microsoft*. Under the Supreme Court's judgment in *Jefferson Parish*, to establish a tying claim a plaintiff must show that the tying and tied products are separate in the sense that "there is a sufficient demand for the purchase of [the tied product] separate from [the tying product] to identify a distinct product market in which it is efficient to offer [the tied good] separately from [the tying good]."[255] In *Jefferson Parish*, anesthesiological services were tied to hospital services. Previous cases involved, *inter alia*, the tying of dry ice to refrigeration containers, punch cards to business machines, salt to salt machines, railway lines to land sale agreements, prefabricated homes to advantageous credit terms, and films to movie projectors. However, the D.C. Circuit recognized the limits of a "separate products" analysis where the conduct concerns software platforms and tying is technological and integrative rather than contractual.[256] In no

254. Modularity has been defined as "organizing complements (products that work with one another) to interoperate through public, nondiscriminatory, and well-understood interfaces." Modularity allows for a "smooth dissemination of the best of breed in each level or layer, as users mix and match components." *See* Farrell & Weiser, *supra* note 24, at 95. *See also* Christopher S. Yoo, *Open Source, Modular Platforms, and the Challenge of Fragmentation*, 1 CRITERION J. ON INNOVATION 619, 620 (2016) (defining platforms as "standardized architectures that divide complex systems into modules and define the interfaces that link these modules.").

255. Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 21–22 (1984).

256. United States v. Microsoft Corp., 253 F.3d 34, 87 (D.C. Cir. 2001).

previous case "was the tied good physically and technologically integrated with the tying good."[257] The consumer demand test within the "separate products" criterion, the Court found, is a "rough proxy for whether a tying arrangement may, on balance, be welfare-enhancing and unsuited to per se condemnation."[258] However, the analysis is a "poor proxy for net efficiency from newly integrated products"[259] because it could "chill innovation to the detriment of consumers by preventing firms from integrating into their products new functionality previously provided by standalone products—and hence, by definition, subject to separate consumer demand." The proposed intervention would freeze the definitional boundaries of platforms, to the detriment of consumers.

If there was evidence that the development of platforms had peaked and fizzled out, there may be a case for disregarding platform owners' continued incentive to innovate in the platform market by introducing new features. However, there is so such evidence. Together, Alphabet (Google's parent company), Amazon, Facebook, and Apple accounted for over $70 billion in R&D spending in 2018.[260] Apple releases *at least* one new version of its iOS platform per year, with each release invariably including new features that were or could have been produced by third parties.[261] The same is true of Google with Android.[262] Because the definition of a platform is constantly evolving, there is no justification for ignoring firms' incentive to innovate in the platform markets in order to exclusively promote intra-platform competition. Instead, competition policy should promote the continued development of platform systems while deterring and tackling the instances in which a platform owner anti-competitively shuts out a downstream rival. A policy which prevents platforms from integrating new features in order to protect less efficient downstream firms will decrease platform owners' impetus to enter adjacent markets and compete on the merits.

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257. *Id.* at 90.

258. *Id.* at 87.

259. *Id.* at 92 (quoting Pl.'s Op. Br. Summ. J. 69) (internal quotations omitted).

260. Statistica, *Ranking of the 20 Companies with the Highest Spending on Research and Development in 2018 (in Billion U.S. Dollars)*, STATISTA, https://www.statista.com/statistics/265645/ranking-of-the-20-companies-with-the-highest-spending-on-research-and-development/ [https://perma.unl.edu/N4U4-257C] (last visited Aug. 29, 2019).

261. *iOS Version History*, WIKIPEDIA, https://en.wikipedia.org/wiki/IOS_version_history [https://perma.unl.edu/L9NN-GM2A] (last visited Aug. 29, 2019).

262. *Android Version History*, WIKIPEDIA, https://en.wikipedia.org/wiki/Android_version_history [https://perma.unl.edu/J477-T4LQ] (last visited Aug. 29, 2019).

4. Lack or Unimportance of Integration Efficiencies

Proponents of non-discrimination or structural separation may counter that efficiencies stemming from leveraging are unimportant or non-existent, or do not depend on conduct that has exclusionary effects. However, as this Article has demonstrated, there are in fact many consumer benefits that arise from leveraging.[263] In this respect, it is telling that § 616 (on which Singer's Net Tribunal is based) has been held to import antitrust concepts, such as "business justifications"[264] and the wider principle that "the goal of antitrust law (and thus of § 616) is to promote consumer welfare by protecting competition, not by protecting individual competitors."[265] For example, in one case the Tennis Channel, a sports programming network, alleged that Comcast, an MVPD, unlawfully discriminated against it by "refusing to broadcast Tennis as widely as it did its own affiliated sports programming networks."[266] The D.C. Circuit held that, despite the fact that Comcast distributed its own channels more widely than it did the Tennis Channel,[267] this conduct was justified by reference to valid business justifications such as there being no consumer demand for wider distribution of the Tennis Channel.[268] The D.C. Circuit held that factors that Comcast must weigh when deciding to carry a network include "the nature of the programming content involved," "the intensity and size of the fan base for that content," and "the level of service sought by the network."[269]

An MVPD can therefore refuse to carry a channel on an equal footing to its equivalent channels if there is a valid reason for doing so that benefits consumers. The case for disregarding pro-competitive leveraging by digital platforms seems weak in light of the fact that even the § 616 regime preserves the distinction between pro- and anti-competitive leveraging in circumstances where there are clear product boundaries (cable operation versus programming) and integrative efficiencies are likely to be unimportant. Under an equivalent standard, platform owners could continue to favor their own ancillary products

263. *See supra* subsection III.D.2.
264. Comcast Cable Commc'ns, LLC v. FCC, 717 F.3d 982, 985 (D.C. Cir. 2013) ("[I]f the MVPD treats vendors differently based on a reasonable business purpose (obviously excluding any purpose to illegitimately hobble the competition from [the complainant channel]), there is no violation."); Tennis Channel, Inc. v. FCC, 827 F.3d 137, 140 (D.C. Cir. 2016) (holding that the D.C. Circuit in *Comcast Cable Commc'ns.* had found that "there was not substantial evidence to show that Comcast had not based its tiering decision on business considerations."); *see also* TCR Sports Broad. Holding LLP v. FCC, 679 F.3d 269, 274–77 (4th Cir. 2012).
265. *Comcast Cable Commc'ns*, 717 F.3d at 992.
266. *Id.* at 983.
267. *Id.* at 985.
268. *Id.* at 986.
269. *Id.* at 985.

within their platforms if doing so provided the best experience for users. The fact that this outcome is the same as under the current antitrust regime means that an equivalent to § 616 for digital platforms is superfluous.[270]

To justify the more extreme proposal of structural separation, which sacrifices benefits from both leveraging *and adjacent market entry* in favor of a *per se* rule against vertical integration, one would expect the Neo-Brandeisians' to *at least* present cogent evidence that adjacent market entry does not benefit consumers. However, this assumption does not reflect reality either.[271] Indeed, Khan concedes that "limiting a network monopolist's ability to compete on its own network would sacrifice certain cost savings."[272] This heedlessness for consumer benefits also explains Neo-Brandeisians' propensity to lambaste vertical mergers, such as Amazon's acquisition of Whole Foods, even where there is no proven likelihood of anti-competitive effects in terms of price or quality.[273] Indeed, the integration of Amazon and Whole Foods engendered a series of price reductions and encouraged rival grocery stores to improve their online ordering infrastructure, which, as one commentator notes, is "exactly the type of price competition and product innovation that antitrust is designed to foster."[274]

In any case, even if efficiencies and other business justifications for leveraging or adjacent market entry were absent or unimportant (which, as demonstrated, they are not), the consumer welfare framework would already tackle leveraging in these circumstances by condemning firms that leverage without valid business justification; therefore, if efficiencies were lacking, there would be no need for nondiscrimination or structural separation.[275]

Unless and until the criteria examined in this Part are empirically verified, we should not consider superseding the consumer welfare standard that protects the legitimate ability of dominant firms to

270. Why, then, does Section 616 exist for MVPDs? One reason is that Congress enacted Section 616 to authorize the FCC to regulate the practices of cable operators, akin to, in the words of then-Judge Kavanaugh in *Comcast Cable Commc'ns*, "adding new police officers to enforce an existing law." *Id.* at 991 n.1.
271. *See supra* subsection III.D.1.
272. Khan, *supra* note 13, at 1080.
273. Press Release, Open Markets Institute, Open Markets Statement on AT&T/Time Warner Decision (June 12, 2018), https://openmarketsinstitute.org/releases/open-markets-statement-att-time-warner-decision/ [https://perma.unl.edu/7ZHU-QW73]; Lina M. Khan, *Amazon Bites off Even More Monopoly Power*, N.Y. TIMES (June 21, 2017), https://www.nytimes.com/2017/06/21/opinion/amazon-whole-foods-jeff-bezos.html [https://perma.unl.edu/VQM3-8C8D].
274. Jonathan M. Barnett, *Thanks to Smart Antitrust, Whole Foods is No Longer 'Whole Paycheck'*, THE HILL (Apr. 8, 2019), https://thehill.com/opinion/finance/437775-thank-smart-antitrust-for-your-cheaper-whole-foods-tab [https://perma.unl.edu/E6BA-BV59].
275. *See supra* section III.E.

enter adjacent markets and out-compete their rivals by leveraging pro-competitively. To the extent that regulatory agencies can intervene to enforce the consumer welfare standard more quickly, even devout Chicagoans would agree that quick antitrust enforcement is better for consumer welfare. However, there is at present no case for denying platform owners the ability to show that their product designs are pro-competitive in order to prop up less efficient competitors in adjacent markets.

V. CONCLUSION

Writing in 1965, Robert Bork and Ward Bowman Jr. described how, "[f]rom its inception with the passage of the Sherman Act' in 1890, antitrust has vacillated between the policy of preserving competition and the policy of preserving competitors from their more energetic and efficient rivals."[276] This "crisis in antitrust" has flared up again, with a renewed debate over the proper ideological goals of antitrust policy in the twenty-first century.

This Article has sought to contribute to the debate surrounding dominant firms and adjacent market competition in the digital economy. Historical analysis tells us that the leverage doctrine was imported from patent to antitrust law without a rigorous economic rationale to explain *why* firms engaged in the conduct that was deemed anti-competitive. This resulted in pervasive hostility towards leveraging behavior that coincided with a general hostility towards vertical integration in the early- to mid-twentieth century. However, Chicago School scholars observed that there is often only a single monopoly profit to be earned in any vertical distribution chain, and that monopolists rarely have the incentive to leverage anti-competitively. Instead, adjacent market entry and leveraging are predominantly motivated by efficiencies that benefit consumers. This Article has set forth why the Chicago critique of anti-competitive leveraging is still relevant and can be used as a starting point for assessing leveraging in the digital economy, as demonstrated by the D.C. Circuit's landmark ruling in *United States v. Microsoft*.

However, scholars have recently questioned whether antitrust law should value short-term consumer gains over potential, albeit as yet unmeasurable, long-term harms in the form of dampened innovation incentives in adjacent markets, caused by platform owners' adjacent market entry and leveraging behavior. Whether one views leveraging by dominant firms to be harmful generally or only when it directly

276. Robert H. Bork & Ward S. Bowman, *The Crisis in Antitrust*, 65 COLUM. L. REV. 363 (1965).

harms consumers is ultimately an ideological question.[277] While Chicagoans have no qualms about the rise of firm "bigness" due to superior efficiency, critics would readily sacrifice the consumer benefits that increased firm-size can bring about in order to redistribute business opportunities. However, this Article has analyzed the policy proposals put forward by critics of the consumer welfare standard, including prophylactic controls on adjacent market entry, non-discrimination regulation, and imposing a greater burden of proof upon platform owners accused of anti-competitive leveraging, exposing their demerits. Unless and until critics verify that digital platforms hold bottleneck monopoly power over distribution, there are widespread anti-competitive harms in adjacent markets, products boundaries are static, and integrative efficiencies are lacking or unimportant, the consumer welfare standard under antitrust law should prevail without recourse to regulatory intervention.

Competition policy is "an expression of the current values and aims of society and is as susceptible to change as political thinking generally."[278] While the fresh identity crisis in antitrust policy rages on, the author hopes that this Article has contributed to one dimension of the debate.

277. *See* Marina L. Lao, *Ideology Matters in the Antitrust Debate*, 79 ANTITRUST L.J. 649, 669 (2014) ("To antitrust conservatives, antitrust liberals may seem too dismissive of evidence of efficiencies and too receptive to evidence of anticompetitive harm. No doubt, to antitrust liberals, antitrust conservatives may seem biased in the opposite directions."); Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-Based Antitrust*, 78 ANTITRUST L.J. 241, 262 (2012) ("The finer details of economics and evidence play only a complementary role to the application of antitrust doctrines rather than take center stage. Antitrust debates thereby become increasingly ideological and insensitive to empirical evidence.").

278. WHISH & BAILEY, *supra* note 208, at 19.